HEC MOTE PROTECT PROSPER	Preliminary Inspection Report for South Carolina Regulated Dams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Info	rmation)
A. Dam Number: D <u>2965</u> 8	Hazard Class 2 B. Name of Dam: Anthony Lake Dam
C. Inspection Date (// _/ // _/20	D/2_) & Time: 1320 D. Date of Last Inspection: (07/10/12007)
E. Location-County/City: 74	ylore I Greenville F. EQC Regional Office: Greenville
G. Inspector's Name: Jo	ha Gbb
H. Owner's Name: R:	chul Provoyer
I. Contact Person (if different	from above):
J. Dam Owner's or Contact P	erson's Phone Numbers: Home ()
	Office ()
	Other ()
K. Dam Owner's or Contact P	
	Comp Clezz/C m
Address 2 (optional)	
City Taylow	State S (
City Taylor	, State <u>S</u> Zip Code <u>29</u> <u>487</u>
City Taylor	, State <u>S</u> Zip Code <u>2967</u>
City <u>Taylor</u>	, State <u>S</u> Zip Code <u>27 67</u>
City <u>Taylor</u> <u>Section II (Dam Conditi</u> General Condition Assessn	, State <u>S</u> Zip Code <u>2767</u> ion) nent (Select one of the following):
City <u>Taylor</u> <u>Section II (Dam Conditi</u> General Condition Assessm a) Satisfactory <u>I</u> t	State       State       Zip Code       Zip 267         ion)         nent (Select one of the following):         b) Fair       c) Poor       d) Unsatisfactory       e) Not Rated
City <u>Taylor</u> <u>Section II (Dam Condition Assessed</u> a) Satisfactory <u>C</u> to Section III (Dam Inspection	ion)         nent (Select one of the following):         b) Fair       c) Poor       d) Unsatisfactory       e) Not Rated         ction Checklist)
City <u>Taylor</u> <u>Section II (Dam Condition</u> <u>General Condition Assesson</u> a) Satisfactory <u>I</u> to <u>Section III (Dam Inspect</u> <u>A. Dam Crest</u> i. Vegetation (grass, trees w	ion)         nent (Select one of the following):         b) Fair       c) Poor         d) Unsatisfactory       e) Not Rated         ction Checklist)
City <u>Taylor</u> <u>Section II (Dam Conditi</u> General Condition Assessm a) Satisfactory <u>Section III (Dam Inspec</u> A. Dam Crest i. Vegetation (grass, trees v ii. Animal activity observed	ion)         nent (Select one of the following):         b) Fair       c) Poor         d) Unsatisfactory       e) Not Rated         ction Checklist)         weeds)? $g_{1455}$ ? $A_{2}$
City <u>Taylor</u> <u>Section II (Dam Conditi</u> <u>General Condition Assesson</u> a) Satisfactory <u>Section III (Dam Inspec</u> <u>A. Dam Crest</u> i. Vegetation (grass, trees w ii. Animal activity observed iii. Any obvious alteration or	ion)         nent (Select one of the following):         b) Fair       c) Poor       d) Unsatisfactory       e) Not Rated         c:tion Checklist)         weeds)? $g_{ASS}$ ? $AO$
City <u>Taylor</u> <u>Section II (Dam Conditi</u> <u>General Condition Assess</u> a) Satisfactory <u>I</u> t <u>Section III (Dam Inspec</u> <u>A. Dam Crest</u> i. Vegetation (grass, trees w ii. Animal activity observed iii. Any obvious alteration or iv. Erosion noticed on crest	$\frac{\text{ion}}{\text{nent (Select one of the following):}}$ $\frac{\text{o) Fair} (\text{c) Poor} (\text{d) Unsatisfactory} (\text{e) Not Rated} (\text{c) Poor} (\text{d) Unsatisfactory} (\text{e) Not Rated} (\text{c) Poor} (c)$
City <u>Taylor</u> <u>Section II (Dam Conditional</u> <u>General Condition Assessional</u> a) Satisfactory <u>I</u> to <u>Section III (Dam Inspect</u> ) <u>A. Dam Crest</u> i. Vegetation (grass, trees w ii. Animal activity observed iii. Any obvious alteration or iv. Erosion noticed on crest	$\frac{\text{ion}}{\text{nent (Select one of the following):}}$ $\frac{\text{o}}{\text{Fair } c) \text{ Poor } d) \text{ Unsatisfactory } e) \text{ Not Rated } c) \text{ Poor } d) \text{ Unsatisfactory } e) \text{ Not Rated } c) \text{ Poor } d) \text{ Unsatisfactory } e) \text{ Not Rated } c) \text{ Poor } c)  $

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Section III (Dam Inspection Checklist) continued
B. Upstream Slope i. Vegetation (grass, trees weeds)?
ii. Animal activity observed?
iii. Any obvious alterations or repairs made?
iv. Erosion observed on upstream slope?
v. Settlement or cracks visible in slope? <u>n</u> J
C. Down Stream Slope i. Vegetation (grass, trees weeds)?
ii. Animal activity observed?
iii. Any obvious alterations or repairs made?
iv. Erosion observed on down stream slope?
v. Settlement or cracks visible in slope?
vi. Toe drains flowing?
vii. Any seepage observed? If so, describe location,
ii. Is there an obvious need to repair or replace trash rack?
iii. Any noticeable problems with debris?
iv. Is valve or gate present?
E. Outlet Pipe i. Any water visibly flowing or leaking outside of the discharge pipe?
ii. Describe any deflection or damage observed to the pipe:
iii. Visible condition of outlet channel: good - cut small supling acound maller outlet
F. Auxiliary (Emergency) Spillway i. Noticeable obstructions to flow? <u>10</u> (four pole along edge)
ii. Animal activity observed?
iii. Any noticeable deterioration in the approach or discharge channel? $\gamma^{\mathfrak{d}}$
iv. Any visible deterioration of structure's crest?
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Auxillary . If applica	Emergency) Spillway contin le, any observed exposure of	nued rebar reinforcement?	/4		<b></b>
i. If applica	ble, any visible leakage below	concrete spillway?	~  A	······································	
. Downstre	am/Hazard Class Issues able changes immediately do	wnstream of the dam	that affects the haz	rard classification?	<u>0</u>
Emergenc . Emergen	Action Plan (EAP) y Action Plan provided by own	ner?			
i. Does EA	contains emergency alert no	tification plan? If so,	when was it last up	dated? minul to	<u>ti</u> res
ii. Does EA	P contain specific actions to ta	ake if the dam has fai	led or is near failure	9?	
ection IV General co	(Conclusions) mments and recommendation	ons:	<u></u>		
ection IV General co	(Conclusions) mments and recommendation	ons: 		· · · · · · · · · · · · · · · · · · ·	
ection IV General co	(Conclusions) mments and recommendation	ons:			
ection IV General co	(Conclusions) mments and recommendation	ons:			
<u>ection IV</u> General co	(Conclusions) mments and recommendation	ons:			
ection IV General co	(Conclusions) mments and recommendation	ons:			
ection IV General co	(Conclusions) mments and recommendation	ons:			
ection IV General co	(Conclusions) mments and recommendation	ons:			

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.

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Catherine B. Templeton, Director Promoting and protecting the health of the public and the environment

November 02, 2012

### CERTIFIED MAIL # 7009 2252 0001 0102 9433

Mrs. Carol Batson 444 Langley Rd Travelers Rest, SC 29690

RE: Inspection of Dam D-2869, Batson Pond Dam, Greenville County

Dear Mrs. Batson:

On November 1, 2012, I conducted a routine inspection of the Batson Pond Dam. I am enclosing a copy of my inspection report of the dam. The following deficiencies were noted:

- 1. Several small saplings around the outlet pipe should be removed. Please note that this continued growth at the slope of the dam compromises the integrity of the structure.
- 2. There are several seepage areas along the down stream slope of the dam. Please have a qualified professional engineer inspect the dam. It is the owner's responsibility to ensure that their dam is safe and operating in a manner that minimizes potential risk to downstream lives and property.
- 3. The drainpipe's trash rack is missing.
- 4. The outlet pipe is not draining. This could be due to the drought or the several seepages on the back of the dam.

**Corrections should be performed within ninety-days (90) from the receipt of this letter.** The Dams and Reservoirs Safety Act Regulations R. 72-4 require these corrections. Failure to perform these corrections is a direct violation of the Dams and Reservoirs Safety Act, Article 3, Section 49-11-260 and subsequent penalties. The Department may assess an administrative fine no more than \$1000.00 against a person who violates this article.

Enclosed are two copies of a Dams and Reservoirs Emergency Notification Plan. Please complete the forms if any information needs to be updated, retain a copy for your use, and return the other copy to this office to be placed in your dam's file. The agencies listed on your copy of the Emergency Alert Notification Plan can provide service in the case of an emergency and should all be notified immediately should a dam failure be imminent.

If you have any questions, please call me at 864-241-1090.

Sincerely

John Cobb Environmental Manager Region 2 Greenville EQC

Cc: John Poole, Bureau of Water – Dam Safety Program SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

Region 2

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The trash rack has fallen off of the drainpipe. It can be seen to the left of the pipe in the above picture.



This picture is of an area of concern that shows seepage on the down stream slope of the dam.



This picture is of an additional area of seepage on the down stream slope of the dam.



This picture shows yet another area of seepage on the down stream slope of the dam.



Small saplings that need to be removed around the outlet pipe.



Catherine B. Templeton, Director Promoting and protecting the health of the public and the environment

November 6, 2012

Ms. Evelyn Holsenback Lake Boling Estates Property 425 Old Batson Road Taylors, SC 29687

RE: Inspection of Boling Pond Dam D-4187 Greenville County

Dear Ms. Holsenback:

On November 1, 2012, I conducted a routine visual inspection of the Boling Pond Dam. Overall, the dam appears to be in good condition and did not exhibit any major deficiencies.

Enclosed are two copies of a Dams and Reservoirs Emergency Notification Plan. Please complete the forms, retain a copy for your use, and return the other copy to this office to be placed in your dam's file. The agencies listed on your copy of the Emergency Alert Notification Plan can provide service in the case of an emergency and should all be notified immediately should a dam failure be imminent.

Provisions to the S.C. Dams and Reservoirs Safety Act require the owner to notify the Department within 30 days of transferring title or the control of his dam to some one else. Please notify our office should control of your dam be transferred.

Also, a copy of the field inspection report is enclosed for your record. Please feel free to call me with any questions or concerns. As a Class 2 Dam, the next scheduled inspection for this dam will be performed in November 2015.

Sincerely,

John Cobb Environmental Manager Greenville EQC Office

cc: John Poole, Bureau of Water

### SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

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Upstream slope of dam



Outlet pipe with trash rack



Crest of dam



Down stream slope of dam



Emergency spillway



Inside of discharge pipe

DHEC PROMOTE PROTECT PROSPER	iminary Inspection Report for South Carolina gulated Dams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Information)	
A. Dam Number: <b>D</b> <u>1103</u> & Hazard Clas	B. Name of Dam: <u>Tankersley Dam</u>
C. Inspection Date ( <u>02/13/20 15</u> ) & Time	: <u>12:30 p.m.</u> D. Date of Last Inspection: ( <u>11/02/2012</u> )
E. Location-County/City: <u>Greenville / Mari</u>	F. EQC Regional Office: Upstate EQC Greenville
G. Inspector's Name: Melissa Dawkins, John Cobb	
H. Owner's Name: DST Properties LLC (Donnie), Bo	nnie Bridwell, Tracy Tankersley, Tankersley Properties LP (Brett),
I. Contact Person (if different from above):	Donnie Tankersley, Bonnie Bridwell, Tracy Tankersley, Brett Tankersley
J. Dam Owner's or Contact Person's Phon	e Numbers: Home ()
	Office ()
K. Dam Owner's or Contact Person's maili	Other ( )
Address 1 393 River Falls Road, Marietta, SC 296	61 (Donnie); 2813 Wade Hampton Blvd., Taylors, SC 29687 (Bonnie)
Address 2 (optional) 8 Club Pointe, Taylors, Se	C 29687 (Tracy); 503 N. Main Street, Travelers Rest, SC 29690 (Brett)
City	, State Zip Code
Section II (Dam Condition) General Condition Assessment (Select a) Satisfactory b) Fair Section III (Dam Inspection Chec	one of the following): c) Poor  d) Unsatisfactory e) Not Rated  klist)
A. Dam Crest i. Vegetation (grass, trees weeds)? Gras	s and weeds were observed. Bare spots were also observed. These areas should be reseeded.
ii. Animal activity observed? None observed	ed
iii. Any obvious alteration or repairs made	Areas where test pits were dug were observed.
iv. Erosion noticed on crest? None obse	erved; however, bare spots must be re-seeded to prevent erosion.
v. Any visible settlement, misalignment o	r cracks? None observed
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### Section III (Dam Inspection Checklist) continued

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? The thick vegetation, including weeds, small trees, shrubs, brush, and other deleterious vegetation,

must be cut and removed. Large trees were also observed. Portions of the dam could not be inspected due to the thick vegetation. See Section IV, item 1. ii. Animal activity observed? Could not fully inspect because of thick vegetation. See Section IV, item 2.

iii.	Any obvious	alterations or r	epairs made?	Areas where test pits were dug were observed.

iv. Erosion observed on upstream slope? Yes, erosion was observed along the normal pool elevation (at water's edge). Monitor this area to ensure it does not worsen. If it does, then slope protection along the water's edge may be needed.

v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? The thick vegetation, including weeds, small trees, shrubs, brush, and other deleterious vegetation, must be cut and removed. Large trees were also observed. Portions of the dam could not be inspected due to thick vegetation and steep slopes. See Section IV, item 1.

ii. Animal activity observed? Could not fully inspect because of thick vegetation and steep slopes. See Section IV, item 2.

iii. Any obvious alterations or repairs made? Areas where test pits were dug were observed. Also, a new power pole had been installed near the rock chute spillway.

iv. Erosion observed on down stream slope? Bare areas were observed on the down stream slope where vegetation had been cut. These areas must be re-seeded.

v. Settlement or cracks visible in slope? Yes, undulations and sloughing were observed throughout the downstream slope between the power pole and support cable and around outlet pipe; however, the entire slope could not be fully inspected because of the thick vegetation and steep slopes.

vi. Toe drains flowing? None seen

vii. Any seepage observed? If so, describe location, None observed. Note that lake was drained during the inspection. flow rate, and any turbidity or color within the flow:

#### **D. Primary Spillway**

i. Any visible deterioration of structure? None onserved

ii. Is there an obvious need to repair or replace trash rack? Not applicable

iii. Any noticeable problems with debris?

None observed. Note lake was drained during the inspection.

iv. Is valve or gate present? Yes, gate was open during inspection and lake was drained.

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? Could not observe because of flowing water

ii. Describe any deflection or damage observed to the pipe:

iii. Visible condition of outlet channel: Good, little to no erosion observed

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? Trees were observed in the spillway. These should be cut and removed in accordance with the

engineer's recommendations

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? None observed. Monitor areas with straw to

#### ensure that vegetation is growing.

iv. Any visible deterioration of structure's crest? None observed

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Could not observe because of flowing water

F.	Auxili	ary	(	Emergency	/)	Spillway	conti	nue	ed	

v. If applicable, any observed exposure of rebar reinforcement? Not applicable

vi. If applicable, any visible leakage below concrete spillway? Not applicable

#### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes, residences at 330 and 354 River Falls Road, Marietta, SC 29661.

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

i. Emergency Action Plan provided by owner?

No, EAP must be submitted on or before 7/31/15.

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:

Note that lake was drained at the time of the inspection.

1. The vegetation must remain at a manageable level so that you can perform complete inspections of the dam and associated structures on a regular

basis to ensure safe operation of the dam. Once the thick vegetation has been removed, an appropriate ground cover must be

established. Grass is the ideal ground cover for a dam.

2. During the 12/6/12 inspection, numerous, deep holes, possibly animal burrows, were observed. If these were not repaired, then the

holes and burrows must be evaluated by a qualified SC licensed professional engineer to determine whether the structural stability of

the dam is affected. Repairs must be made to the holes and burrows. Depending on the extent of the damage, permits may be necessary for

the repairs; contact John Poole at 803-898-4212 to determine whether permits are necessary.

3. Follow recommendations and requirements in engineering report dated 1/19/15, DHEC permit 23-0025 (upon its issuance),

and consent orders 13-042-W, 14-005-W, and 14-008-W.

## 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.

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

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

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b) FAIR- No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9			
Section I (Owner's Infor	mation)				
A. Dam Number: <b>D</b> <u>1399</u> &	Hazard Class <sup>2</sup>	B. Name of Dam: Lake Placid			
C. Inspection Date ( <u>12/29</u> /20	<u>1</u> 4) & Time: <u>11:30 a.m.</u>	D. Date of Last Inspection: ( <u>11/22/2011</u> )			
E. Location-County/City: Greenvi	le / Greenville	F. EQC Regional Office: Upstate EQC Greenville			
G. Inspector's Name: Melissa Daw	kins (Kyle Lancaster also present	)			
H. Owner's Name: S.C. Department	of Parks, Recreation, & Tourism				
I. Contact Person (if different fi	om above): <u>Jason Hege (Pa</u>	rk Manager)			
J. Dam Owner's or Contact Pe	rson's Phone Numbers:	Home ()			
		Office ( <u>864</u> ) <u>244</u> - <u>5565</u>			
K. Dam Owner's or Contact Pe	erson's mailing address:	Other ( <u>864</u> ) <u>421</u> - <u>2852</u>			
	L				
Address 2 (optional)					
Section II (Dam Condition	on)				
General Condition Assessme	ent (Select one of the	following):			
a) Satisfactory b)	Fair c) Poor	✔ d) Unsatisfactory e) Not Rated			
Section III (Dam Inspect	ion Checklist)				
<b>A. Dam Crest</b> i. Vegetation (grass, trees w	eeds)? No vegetation observ	ed (masonry dam).			
ii. Animal activity observed? None observed					
iii. Any obvious alteration or r	iii. Any obvious alteration or repairs made? None observed				
iv. Erosion noticed on crest?	None observed				
v. Any visible settlement, mis	alignment or cracks? _	lone observed			
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# Section III (Dam Inspection Checklist) continued

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? A small amount of vegetation was observed growing in the joints of the masonry structure. This vegetation should be cut regularly.

ii. Animal activity observed? None observed
iii. Any obvious alterations or repairs made? None observed
IV. Erosion observed on upstream slope? None observed
v. Sottlement er erecke visible in dene? Nam skarvad
C. Down Stream Slope
i. Vegetation (grass, trees weeds)? Vegetation was observed growing in the joints of the masonry structure, especially under the top
row of stone. This vegetation should be cut or treated regularly.
ii. Animal activity observed? None observed
iii. Any obvious alterations or repairs made? None observed
iv. Erosion observed on down stream slope? None observed
V. Settlement or cracks visible in slope? Yes, water was observed flowing through cracks in the structure 1-2' to the right of the spillway
at the spillway elevation, 2 stones down from the top approximately 10' to the right of the spillway, and in the middle of the left wall. See Section IV, item 1.
vii Any saanage abserved? If so, describe location Vas flowing sagnage was abserved along the tap on the right side of the dam
flow rate and any turbidity or color within the flow.
engineer. A plan must be developed to measure seepage (flow rate and turbidity) in this area at least monthly. See Section IV, item 2
D Primary Snillway
i. Any visible deterioration of structure?
ii la thara an abuique read to rendir ar rendere treak read?
II. IS there an obvious need to repair of replace trash rack? Not applicable
iii. Any noticeable problems with debris? Yes, a small amount of debris (limbs, tree trunks) was observed. This should be removed
on a regular basis to ensure full spillway capacity.
iv. Is valve or gate present? Yes, the valve stem is present; however, according to Mr. Hege, it is no longer operable.
E. Outlet Pipe
i. Any water visibly flowing or leaking outside of the discharge pipe? The low-level outlet pipe was observed in this section.
According to Mr. Here, the plate in the lake is not completely closed and a small amount of water was observed flowing through this pipe. See Section IV, item 3
ii Describe any deflection or damage observed to the pipe:
It appears that the bottom of the pipe may be corroded.
See Section IV, item 3.
III. VISIBLE CONDITION OF OUTLET CHANNEL: A foot bridge is present just downstream of the dam. Little to no erosion was observed. Some
debris (logs) was present in the outlet channel.
F. Auxiliary (Emergency) Spillway
i. Noticeable obstructions to flow? An additional masonry spillway on the right side was observed as the emergency spillway. No
obstructions observed.
ii. Animal activity observed? None observed
iii. Any noticeable deterioration in the approach or discharge chappel?
In Any nonceable deterioration in the approach of discridinge charmel? No approach channel. Some erosion may be
present along the toe in the discharge channel; it was difficult to inspect due to vegetation. The vegetation should be cut and removed. See Section IV, item 4.
IV. Any visible deterioration of structure's crest?

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F. Auxiliary	(Emergency)	Spillway	continued
	(	• p	

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

vi. If applicable, any visible leakage below concrete spillway? Not applicable

#### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes. according to GIS, a residence is present at 425 E. Mountain Creek Road.

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

i. Emergency Action Plan provided by owner?

No. EAP must be submitted on or before 4/30/15.

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 flows through these cracks must be evaluated by a qualified S.C. licensed professional engineer to determine if the safety of the

structure is affected and whether repairs need to be made.

2. Submit the plan to the Permitting Section in Columbia for approval (John Poole, SCDHEC Dams and Reservoir Permitting, 2600 Bull

Street, Columbia, SC 29201). The seepage measurements must be recorded at least monthly and should be correlated to the stage in the

reservoir at the time of the measurement.

3. The pipe must be evaluated by a qualified S.C. licensed professional engineer to determine whether the deterioration of the pipe has caused or

could cause issues with safety of the structure and whether the pipe should be grouted or otherwise sealed off. As part of this evaluation,

the pipe should be inspected using a camera or other method to view the inside of the pipe. Permits would be necessary for closure

of the low-level outlet.

4. This area must be evaluated by a qualified S.C. licensed professional engineer to determine whether any repairs need to be made.

## 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.

DHEC 2604 (Rev 11/2011)

Not applicable

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

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

### DHEC 2604 (Rev. 11/2011)

b) FAIR- No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

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

D H E C Regulated Dams and Impoundment Structures Regulations R.72-1 through R.72-9				
Section I (Owner's Information)				
A. Dam Number: D 1933 & Hazard Class 2 B. Name of Dam: Georges Creek WCD 1A				
C. Inspection Date ( <u>12/02/20 13</u> ) & Time: <u>11:45 a.m.</u> D. Date of Last Inspection: ( <u>12/16/2010</u> )				
E. Location-County/City: Pickens / Easley F. EQC Regional Office: Upstate Greenville				
G. Inspector's Name: Melissa Dawkins				
H. Owner's Name: Hendricks Trust (HT)/ Stewart Bauknight (SB) / Pickens County Soil & Water Conservation District (PCSWCD-operator)				
I. Contact Person (if different from above): Leon Hendricks Jr. (HT)Ross Stewart (PCSWCD)				
J. Dam Owner's or Contact Person's Phone Numbers: Home ()				
Office ()				
Cther ( <u>864-420-9573 (Ross Stewart)</u>				
Address 1 6 Aldridge Dr. (HT): 998 Holly Bush Rd. (SB): P.O. Box 245 (PCSWCD)				
Address 2 (ontional)				
City Greenville 29607 (HT): Easley 29640 (SR): Pickens 29671 (PCSWCD) State SC Zin Code				
Section II (Dam Condition) General Condition Assessment (Select one of the following):				
a) Satisfactory b) Fair V c) Poor d) Unsatisfactory e) Not Rated				
A. Dam Crest i. Vegetation (grass, trees weeds)? Grass and weeds in good condition				
ii. Animal activity observed? None observed				
iii. Any obvious alteration or repairs made? None observed				
iv. Erosion noticed on crest? None observed				
v. Any visible settlement, misalignment or cracks? None observed				
DHEC 2604 (Rev 11/2011)				

### Section III (Dam Inspection Checklist) continued

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Grass, weeds, and woody vegetation had been recently cut. When the woody vegetation is cut, it must be removed and not left in place on the dam because that makes it difficult to perform a complete inspection.

ii. Animal activity observed?	Yes, a hole was observed approximately 20' upslope and 100' right of the primary spillway. An animal trail
down to the water was observed 20' to the righ	t of the primary spillway. It was difficult to perform a complete inspection because of cut vegetation left in place.
iii. Any obvious alterations or r	epairs made? None observed
iv. Erosion observed on upstre	am slope? Yes, erosion around tractor tracks was observed. Monitor these areas and repair and reseed
as necessary.	
v. Settlement or cracks visible	in slope? None observed
C. Down Stream Slope	

i. Vegetation (grass, trees weeds)? Grass, weeds, and woody vegetation had been recently cut. When the woody vegetation is cut, it must be removed and not left in place on the dam because that makes it difficult to perform a complete inspection.

ii. Animal activity observed? Yes, a newly constructed animal hole was observed approximately 20' upslope and 30' left of the outlet pipe. Fresh dirt was in place just outside the hole and an animal trail was observed down to the water left of the outlet pipe.

iii. Any obvious alterations or repairs made? None observed

iv. Erosion observed on down stream slope? Yes, erosion around tractor tracks was observed. Monitor these areas and repair and reseed as necessary. Several bare areas were also observed throughout the downstream slope. Reseed these areas

v. Settlement or cracks visible in slope? None observed.

vi. Toe drains flowing? Yes, both had a significant amount of flow during the inspection. Both were partially clogged and need to be cleaned out.

vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow:

Yes, a potential area of seepage was observed approximately 200' to the right of the outlet pipe, near a mound of riprap. See Section IV, item 1.

#### **D. Primary Spillway**

- i. Any visible deterioration of structure?
  - None observed

ii. Is there an obvious need to repair or replace trash rack?

Additional bars may need to be added to the sides to prevent

large trees and limbs from getting inside the structure. Any modification to the riser would require a permit from the Permitting Section in Columbia. iii. Any noticeable problems with debris? Yes, large trees and limbs were caught on top of, on the sides of, and inside the riser structure.

iv. Is valve or gate present? Yes

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? None observed

ii. Describe any deflection or damage observed to the pipe:

iii. Visible condition of outlet channel: Good condition

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? None observed

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? None observed

iv. Any visible deterioration of structure's crest? None observed

DHEC 2604 (Rev 11/2011)

None observed

F Auviliary	(Emergency)	Spillway	continued
r. Auxiliary	(Emergency)	Spillway	/ continued

v. If applicable, any observed exposure of rebar reinforcement? Not ap

vi. If applicable, any visible leakage below concrete spillway? Not applicable

#### H. Downstream/Hazard Class Issues

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

No

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

i. Emergency Action Plan provided by owner?

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. A plan must be developed to measure the seepage (flow rate and turbidity) in this area at least monthly. Submit the plan

to the Permitting Section in Columbia for approval (John Poole, SCDHEC Dams and Reservoir Permitting, 2600 Bull Street,

Columbia, SC 29201). The seepage measurements must be recorded at least monthly and should be correlated to the stage in the

reservoir at the time of the measurement. The plan to measure the seepage must be submitted on or before June 22, 2014.

## 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.

DHEC 2604 (Rev 11/2011)

Not applicable

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

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

### DHEC 2604 (Rev. 11/2011)

b) FAIR- No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

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

D H E C 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 1952 & Hazard Class 2 B. Name of Dam: Twelvemile Creek WCD Dam 22				
C. Inspection Date ( <u>05/13/20 15</u> ) & Time: <u>9:15 a.m.</u> D. Date of Last Inspection: ( <u>03/29/2012</u> )				
E. Location-County/City: Plckens / Pickens F. EQC Regional Office: Upstate EQC Greenville				
G. Inspector's Name: Melissa Dawkins				
H. Owner's Name: Bruce Farm LLC (owner)/ Pickens County Soil & Water Conservation District (operator)/ Harold McJunkin (leases property)				
I. Contact Person (if different from above): Mike Banks with NRCS (for Pickens County SWCD)/ Carol Geiger (for McJunkin)				
J. Dam Owner's or Contact Person's Phone Numbers: Home ( <u>803-609-7497 (Carol Geiger)</u>				
Office ( <u>864-224</u> )2126 ext.3 or 108 (Mike)				
Other ( <u>864-940-0852</u> (Mike cell) K. Dam Owner's or Contact Person's mailing address:				
Address 1 399 Mill Creek Road, Atlanta GA 30307 (Bruce Farm LLC)				
Address 2 (optional) P.O. Box 245, Pickens , SC 29671 (Pickens County SWCD)				
City, State Zip Code				
Section II (Dam Condition)         General Condition Assessment (Select one of the following):         a) Satisfactory       b) Fair         b) Fair       c) Poor         d) Unsatisfactory       e) Not Rated         Section III (Dam Inspection Checklist)				
i. Vegetation (grass, trees weeds)? A road was in place; see item iv below. Grass in good condition was observed; however, it needs to be cut.				
II. Animal activity ODSErved? res, an animal trail was observed up and over the crest hear the primary spillway.				
iii. Any obvious alteration or repairs made? None observed				
iv. Erosion noticed on crest?       Yes, deep ruts were observed in 4 places on the crest (near spillway, approximately 30' to the right of the spillway, at the corner of the dam on the right side, and at the right groin). These ruts must be repaired and then re-grassed or otherwise stabilized (gravel, etc.).         v. Any visible settlement, misalignment or cracks?       Deep ruts were observed; see item iv above.				
DHEC 2604 (Rev 11/2011)				

### Section III (Dam Inspection Checklist) continued

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? The thick vegetation, including weeds, brush, and other deleterious vegetation, must be cut and removed. See Section IV, item 1. ii. Animal activity observed? Yes, an animal trail to the spillway was observed. Monitor the dam regularly to ensure that harmful animal species

are not present. Remove using legal means, as necessary.

iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation

iv. Erosion observed on upstream slope? A small amount of erosion was observed at the water's edge where the animal trail entered the water. Monitor this area to ensure that it does not worsen.

v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? The thick vegetation, including weeds, brush, and other deleterious vegetation, must be cut and removed from the entire dam and extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater. See Section IV, items 1 and 2.

ii. Animal activity observed? Yes, animal trails were observed around the outlet pipe, and possible animal burrows were observed around the outlet pipe, primarily on the left side. Monitor the dam regularly to ensure that harmful animal species are not present. Remove using legal means, as necessary. See Section IV, item 3.

iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation

iv. Erosion observed on down stream slope? Significant erosion was observed around the outlet pipe, primarily on the left side. See Section IV, item 4. Small bare areas were observed along the toe on the right side. Monitor these areas and re-seed as necessary.

v. Settlement or cracks visible in slope? Minor sloughing, possibly equipment tracks, was observed along the toe on the right side. Monitor these areas to ensure that the sloughing does not worsen, grass is re-established, and erosion does not occur.

vi. Toe drains flowing? The right toe drain was trickling. The left toe drain appeared to be clogged with vegetation growing out of the drain.

vii. Any seepage observed? If so, describe location, None observed but could not fully inspect because of thick vegetation flow rate, and any turbidity or color within the flow:

#### **D.** Primary Spillway

i. Any visible deterioration of structure? None observed

ii. Is there an obvious need to repair or replace trash rack?

be removed as part of regular maintenance.

iii. Any noticeable problems with debris? Vegetation was observed growing out of the spillway; this must be removed.

iv. Is valve or gate present? Yes, unknown if operated regularly.

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? Could not observe because of flowing water

ii. Describe any deflection or damage observed to the pipe:

iii. Visible condition of outlet channel: Significant erosion was observed around the outlet pipe on both side; see item C.iv above.

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? A boat was located in the entrance to the emergency spillway. It must be moved.

ii. Animal activity observed? None observed but could not fully inspect because of thick vegetation

iii. Any noticeable deterioration in the approach or discharge channel? A cut-out area was observed at the entrance to the

spillway (appears to have been present at least back to 2010). It appears to be stable.

iv. Any visible deterioration of structure's crest? None observed

DHEC 2604 (Rev 11/2011)

None observed. A small amount of debris was observed and should

Could not observe because of flowing water

F. Auxiliary (Emergency) Spillway continue
--

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

vi. If applicable, any visible leakage below concrete spillway? Not applicable

#### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes, residences at 486 and 500 Midway Road, Pickens SC 29671.

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

i. Emergency Action Plan provided by owner?

No, updated EAP must be submitted on or before 9/19/15.

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. Portions of the dam could not be inspected due to the thick vegetation. The vegetation must remain at a manageable level so that you can

perform complete inspections of the dam and associated structures on a regular basis to ensure safe operation of the dam. Once the thick

vegetation has been removed, an appropriate ground cover must be established. Grass is the ideal ground cover for a dam.

2. Large trees (diameter >4") were observed along the toe of the downstream slope on both sides. The larger trees (on the entire dam and

extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater) must be evaluated by a qualified

S.C. licensed professional engineer to determine if they should be removed. A tree management plan must be developed to address

the long-term plans for tree removal. Permits may be necessary for removal of the large trees; contact David Graves at 803-898-4398

to determine whether permits are necessary.

3. The holes and burrows must be evaluated by a qualified S.C. licensed professional engineer to determine what repairs need

to be made to prevent further erosion.

4. This erosion was noted in previous inspection reports and appears to have worsened over the years. The erosion must be evaluated by a

qualified S.C. licensed professional engineer to determine what repairs need to be made to stabilize the area and prevent further erosion.

## 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.

DHEC 2604 (Rev 11/2011)

Not applicable

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

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

### DHEC 2604 (Rev. 11/2011)

b) FAIR- No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

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

DHEC ROMOTE PROTECT PROSPER	Preliminary In Regulated Da	spection Report for South Carolina ams and Impoundment Structures Regulations R.72-1 through R.72-9			
Section I (Owner's Information)					
A. Dam Number: <b>D</b> <u>2825</u> 8	A Hazard Class_2	B. Name of Dam: Lake Gintomo			
C. Inspection Date ( <u>03/13/2</u>	) <u>13</u> ) & Time: <u>2:30 p.m.</u>	D. Date of Last Inspection: (01_/20_/2010)			
E. Location-County/City: Green	ville / Cleveland	F. EQC Regional Office: Greenville			
G. Inspector's Name: Melissa Da	wkins				
H. Owner's Name: Alice Lawton/	H. Owner's Name: Alice Lawton/ GIN-TO-MO				
I. Contact Person (if different from above):					
J. Dam Owner's or Contact P	erson's Phone Numbers:	Home ( <u>864_) 836_</u> - <u>6539</u> _			
		Office ()			
K. Dam Owner's or Contact Person's mailing address:       Other ( )         Address 1 120 Gintomo Road					
Address 2 (optional)					
City <u>Cleveland</u> , State <u>SC</u> Zip Code <u>29635</u>					
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)? Readbed, good contiion         ii. Animal activity observed? None observed         iii. Any obvious alteration or repairs made? Repairs to bridge structure over spillway         iv. Erosion noticed on crest? None observed					
v. Any visible settlement, misalignment or cracks? None observed					
DHEC 2604 (Rev 11/2011)					

### Section III (Dam Inspection Checklist) continued

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Grass, good condition

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? None observed

iv. Erosion observed on upstream slope? Small areas of erosion observed

v. Settlement or cracks visible in slope? None observed

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Primarily moss and grass. Shrubs at the toe of the slope must be removed before their root systems become large enough to create seepage pathways. Two small, pine/ spruce trees near the left groin must be cut immediately to prevent seepage pathways. None observed

ii. Animal activity observed?

iii. Any obvious alterations or repairs made? Yes, riprap area, approximately 50' x 20', at the toe of the slope to the left of the outlet pipe

iv. Erosion observed on down stream slope?	Appears that the toe of the slope is eroding, as evidenced by the steep slopes at the
toe of the dam; structural stability of the dam needs to be evaluated by a	a qualified licensed SC professional engineer. Bare areas observed under fallen riprap.
• · · · · · · •	

v. Settlement or cracks visible in slope? None observed

vi. Toe drains flowing? None observed

vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow:

Yes, area approximately 30' to the left and 20' downslope of the riprap area slowly flowing. Area should be observed on a regular basis to ensure that

Pipe was flowing and could not safely access to observe

None observed

the flow rate does not increase or become turbid.

#### **D.** Primary Spillway

i. Any visible deterioration of structure? None observed

ii. Is there an obvious need to repair or replace trash rack?

iii. Any noticeable problems with debris? None observed

iv. Is valve or gate present? None observed

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? None visible from above but area around outlet pipe is not safely accessible (pipe discharges approximately 15' above the creek bottom with steep slopes surrounding the area). Debris in bottom of pipe should be removed.

ii. Describe any deflection or damage observed to the pipe:

completely. From above, it appears that the end of the pipe had some damage or that the outlet pipe had been altered or replaced since the previous inspection.

iii. Visible condition of outlet channel: Rocky creek bed in good condition. Metal sheet under outlet pipe appeared to be used as

erosion protection--this is not recommended as permanent erosion control.

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? Yes, metal fence at entrance to spillway should be removed immediately.

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? Yes, concrete slabs in the bottom of the channel

had shifted. Spillway was flowing substantially so could not inspect completely.

iv. Any visible deterioration of structure's crest? Yes, concrete slabs in the bottom of the channel had shifted. Spillway was

flowing substantially so could not inspect completely.

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

v. If applicable, any observed exposure of rebar reinforcement? None observed, but spillway was flowing substantially so could not inspect completely.

vi. If applicable, any visible leakage below concrete spillway? None observed, but spillway was flowing substantially so could not inspect completely.

#### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes, house at nearest downstream road crossing.

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

i. Emergency Action Plan provided by owner?

Yes, received 2/18/10 by the Department

ii. Does EAP contains emergency alert notification plan? If so, when was it last updated? Yes, 2/17/10

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

# Section IV (Conclusions)

#### General comments and recommendations:

1. Emergency spillway appears to flow regularly: Hydraulic adequacy of primary spillway needs to be evaluated by a

qualified, licensed SC professional engineer.

2. Erosion at the toe of the dam: A detailed analysis of the structural stability of the dam must be done by a qualified,

licensed SC professional engineer.

3. Provide explanation as to why dam was partially drained in 2011.

## 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.

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

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

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b) FAIR- No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

**Office Mechanisms and filing**: The form must be sent to the Dam's owner(s) and filed with the Bureau of Water, Dams and Reservoir Safety Program, before the end of the following month after which the inspections were performed. The report will be filed in the Bureau of Water's file room and will be retained for at least three years after the Department certifies the removal of the inspected dam.
DHEC PROMOTE PROTECT PROSPER	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9	
Section I (Owner's Info	rmation)		
A. Dam Number: <b>D</b> <u>2828</u> 8	& Hazard Class <sup>2</sup>	B. Name of Dam: Friddle Lake	
C. Inspection Date ( <u>05/28</u> /20	0 <u>15</u> ) & Time: <u>1:00 p.m.</u>	D. Date of Last Inspection: ( <u>11/21/2012</u> )	
E. Location-County/City: Green	ville / Marietta	F. EQC Regional Office: Upstate EQC Greenville	
G. Inspector's Name: Melissa Da	awkins, Kyle Lancaster		
H. Owner's Name: Palmetto Bible	Camp		
I. Contact Person (if different	from above): Tim Godley (hot	wiredgodley@bellsouth.net)	
J. Dam Owner's or Contact P	erson's Phone Numbers	Home ()	
		Office ()	
K. Dam Owner's or Contact Person's mailing address:       Other ( <u>828-389-3397 (Tim cell)</u> Address 1 <u>142 Fall Creek Road</u>			
City <u>Marietta</u> , State <u>SC</u> Zip Code <u>29661</u>			
Section II (Dam Condition)         General Condition Assessment (Select one of the following):         a) Satisfactory       b) Fair         b) Fair       c) Poor         c) Poor       d) Unsatisfactory         e) Not Rated         Section III (Dam Inspection Checklist)         A. Dam Crest         i. Vegetation (grass, trees weeds)?         A dirt road was in place on the crest. According to Mr. Godley, the road was created when the work on the			
ii. Animal activity observed	primary spillway was done in 2014. Grass and weeds were also observed with a few bare spots. Re-seed these areas and monitor to ensure grass is established. ii. Animal activity observed? None observed		
iii. Any obvious alteration or	iii. Any obvious alteration or repairs made? Siphons were installed according to CP 23-0023 issued 1/9/14.		
iv. Erosion noticed on crest is established. v. Any visible settlement, m	iv. Erosion noticed on crest?       A few bare spots, primarily tire tracks, were observed. Re-seed these areas and monitor to ensure grass         is established.       V. Any visible settlement, misalignment or cracks?		
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#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? The thick vegetation, including weeds, brush, and other deleterious vegetation, must be cut and

removed. Bare areas were also observed. Re-seed these areas and monitor to ensure grass is established. See Section IV, item 1.

ii. Animal activity observed? None observed but could not fully inspect because of thick vegetation

iii. Any obvious alterations or repairs made? Siphons were installed according to CP 23-0023 issued 1/9/14.

iv. Erosion observed on upstream slope? Erosion, sloughing (not all active), and damage to the slope were observed and must be repaired. According to Mr. Godley, some of this damage was from equipment gaining access to repair the primary spillway. See Section IV, item 2.

v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Same as upstream slope - the thick vegetation must be removed from the entire dam and extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater. See Section IV, items 1 and 3.

ii. Animal activity observed? None observed but could not fully inspect because of thick vegetation

iii. Any obvious alterations or repairs made? Siphons were installed according to CP 23-0023 issued 1/9/14.

iv. Erosion observed on down stream slope? Minor erosion was observed along the left groin. Surface water flows should be diverted away from this area to prevent further erosion. Erosion around the outlet pipe was observed as mentioned in previous inspection reports. See Section IV, item 4. v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation

vi. Toe drains flowing? Yes, both toe drains were flowing. Make sure they are cleaned out regularly to prevent a blockage

vii. Any seepage observed? If so, describe location, None observed but could not fully inspect because of thick vegetation flow rate, and any turbidity or color within the flow:

### **D. Primary Spillway**

i. Any visible deterioration of structure?

None observed. Modifications to the spillway were made according to CP 23-0023 issued 1/9/14.

The coating on the outside of the outlet pipe had

ii. Is there an obvious need to	repair or replace trash rack?

None observed

iii. Any noticeable problems with debris? A small amount of debris was present and should be removed as part of routine maintenance.

iv. Is valve or gate present? Yes, a valve and gate are present and operated annually according to Mr. Godley; however, they do not drain the

lake. The siphons were installed to be able to drop the lake level lower.

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? None observed but could not fully inspect due to flowing water

ii. Describe any deflection or damage observed to the pipe:

deteriorated. The inside of the pipe could not be observed due to flowing water. According to CP 23-0023, the outlet pipe needs to be replaced.

iii. Visible condition of outlet channel: Some erosion was observed on the left side. Monitor this area to ensure that it does not worsen.

If it does, then repairs need to be done; permits may be necessary for those repairs.

### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? Yes, debris piles and logs were observed in the spillway. These must be removed.

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? None observed

iv. Any visible deterioration of structure's crest?

None observed

F. Auxiliary (Emergency) Spillway continued
v. If applicable, any observed exposure of rebar reinforcement? Not applicable
vi. If applicable, any visible leakage below concrete spillway? Not applicable
H. Downstream/Hazard Class Issues
i. Any noticeable changes immediately downstream of the dam that affects the hazard classification?
Yes, residences at 195 and 212 Gap Creek Road and 101, 103, 105, 115 Cool River Road, Marietta, SC 29661
I. Emergency Action Plan (EAP)
i. Emergency Action Plan provided by owner? No, updated EAP must be submitted on or before 9/23/15.
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. Portions of the dam could not be inspected due to the thick vegetation. The vegetation must remain at a manageable level so that you can perform
complete inspections of the dam and associated structures on a regular basis to ensure safe operation of the dam. Once the thick vegetation has been removed
an appropriate ground cover must be established. Grass is the ideal ground cover for a dam.
2. Because a construction permit is already in place, a request for this additional work can be submitted to the Permitting Section (David Graves, SCDHEC

Dams and Reservoir Permitting, 2600 Bull Street, Columbia, SC 29201). This request must be accompanied with plans showing the areas of repair.

3. Large trees (diameter >4") were observed along the toe of the slope. The larger trees (on the entire dam and extending one-half the height of the

dam beyond the toe or 25' beyond the toe, whichever is greater) must be evaluated by a qualified S.C. licensed professional engineer to determine

if they should be removed. A tree management plan must be developed to address the long-term plans for tree removal. Permits may be necessary

for removal of the large trees; contact David Graves at 803-898-4398 to determine whether permits are necessary.

4. The erosion must be evaluated by a qualified S.C. licensed professional engineer to determine whether repairs need to be made. Follow the

engineer's recommendations for repair of this area to prevent further erosion. If repairs are needed, then, because a construction permit is already in

place, a request for this additional work can be submitted to the Permitting Section (David Graves, SCDHEC Dams and Reservoir Permitting, 2600 Bull Street, Columbia, SC 29201).

### 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.

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DHEC ROMOTE PROTECT PROSPER	Preliminary I Regulated I	nspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Info	rmation)	
A. Dam Number: <b>D</b> <u>2837</u> 8	A Hazard Class <sup>2</sup>	B. Name of Dam: <u>Stevens Pond</u>
C. Inspection Date ( <u>12/13</u> /2	) <u>13</u> ) & Time: <u>11:30 a.m.</u>	D. Date of Last Inspection: ( <u>12/9_/2010</u> )
E. Location-County/City: Green	ville / Travelers Rest	F. EQC Regional Office: Upstate EQC Greenville
G. Inspector's Name: Melissa Da	wkins, Kevin Lewis	
H. Owner's Name: John & Hilda H	ulsey	
I. Contact Person (if different	from above):	
J. Dam Owner's or Contact P	erson's Phone Numbers:	Home ( <u>864_) 576_</u> - <u>1292</u> _
		Office ()
K. Dam Owner's or Contact F Address 1 202 Thornhill Drive	erson's mailing address:	Other ( )
Address 2 (optional)		
Section II (Dam Condit	ion) hent (Select one of the fo	ollowing):
a) Satisfactory b) Fair c) Poor V d) Unsatisfactory e) Not Rated Section III (Dam Inspection Checklist)		
A. Dam Crest i. Vegetation (grass, trees v cut and removed. Portions of the dam co ii. Animal activity observed cause significant damage to a dam. See	veeds)? Thick vegetation, includi uld not be inspected due to the thick? Yes, many animal trails, holes, an Section IV, item 4.	ng weeds, small trees, shrubs, brush, and other deleterious vegetation, must be vegetation. See Section IV, items 1 and 2. d trees/ limbs cut down by beavers were observed. Burrowing animals can cause
iii. Any obvious alteration or	repairs made? None obse	rved but could not fully inspect due to thick vegetation
iv. Erosion noticed on crest	? None observed but could not	fully inspect due to thick vegetation
v. Any visible settlement, m	salignment or cracks? No.	one observed but could not fully inspect due to thick vegetation
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#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Same as crest (Section III.A.i). Large trees were also observed. 3. The larger trees must be evaluated by

a qualified South Carolina licensed professional engineer to determine if they should be removed. See Section IV, items 1, 2, and 3.

ii. Animal activity observed? Same as crest (Section III.A.ii). See Section IV, item 4.

iii. Any obvious alterations or repairs made? None observed but could not fully inspect due to thick vegetation

iv. Erosion observed on upstream slope? Yes, erosion was observed in the areas of the animal trails down to the water's edge.

v. Settlement or cracks visible in slope? None observed but could not fully inspect due to thick vegetation

### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Same as upstream slope (Section III.B.i). See Section IV, items 1, 2, and 3.

ii. Animal activity observed? Same as crest (Section III.A.ii). See Section IV, item 4.

iii. Any obvious alterations or repairs made? None observed but could not fully inspect due to thick vegetation

iv. Erosion observed on down stream slope? Water was observed backing up onto the toe of the slope, under the outlet pipe. When I spoke to the owner before the inspection, he indicated that the water may be backing up due to beaver dams downstream. See Section IV, item 5.

v. Settlement or cracks visible in slope? None observed but could not fully inspect due to thick vegetation

vi. Toe drains flowing? None seen but could not fully inspect due to thick vegetation

vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: monitored regularly to ensure that the water does not become flowing and turbid. This would indicate a very serious situation and the Department should be notified immediately.

#### **D. Primary Spillway**

i. Any visible deterioration of structure? Water was flowing through outlet pipe, but the water surface elevation was below the top of the riser or trash

rack. If there is not a larger diameter pipe (acting as a trash rack) in place at the top of the riser, then this may be an indication of severe deterioration of the primary spillway. See Section IV, item 6. **ii. Is there an obvious need to repair or replace trash rack?** Unable to determine if trash rack was in place. See item i above.

iii. Any noticeable problems with debris? No debris was observed around the primary spillway.

iv. Is valve or gate present? None observed

### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? None observed; however, the flows from the outlet

Could not observed because of flowing water

pipe were surging and spurting. This is not a typical situation and should be evaluated by a qualified South Carolina licensed professional engineer.

ii. Describe any deflection or damage observed to the pipe:

iii. Visible condition of outlet channel: See Section III.C.iv. Additional outlet protection may be needed to prevent undercutting of the

outlet pipe. See Section IV, item 5.

F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? Yes, the earthen spillway was on the left side and was full of trees and downed trees. The small trees and downed trees. The small trees and downed trees and downed trees and downed trees and downed trees. The small trees and downed trees. The small trees and downed trees and downed trees and downed trees and downed trees. The small trees and downed trees. The small trees and downed trees and downed trees and downed trees and downed trees.

ii. Animal activity observed? None observed but could not fully inspect due to thick vegetation

iii. Any noticeable deterioration in the approach or discharge channel? None observed but could not fully inspect due to thick vegetation

iv. Any visible deterioration of structure's crest? None observed

F. Auxiliary (Emergency) Spillway continued v. If applicable, any observed exposure of rebar reinforcement? <u>Not applicable</u>
vi. If applicable, any visible leakage below concrete spillway? Not applicable
H. Downstream/Hazard Class Issues i. Any noticeable changes immediately downstream of the dam that affects the hazard classification?
Yes, residences at 315 Goodwin Road. The mobile home does not appear to be occupied, and it was difficult to tell whether
the other structure was occupied.
I. Emergency Action Plan (EAP)         i. Emergency Action Plan provided by owner?         No, EAP must be submitted on or before 10/12/14.
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?
1. Once the thick vegetation has been removed, an appropriate ground cover must be established. Grass is the ideal ground cover for a dam.
2. The vegetation must remain at a manageable level so that you can perform complete inspections of the dam and associated structures
on a regular basis to ensure safe operation of the dam.
3. A tree management plan must be developed to address the long-term plans for tree removal. Permits may be necessary for removal of the large trees;
contact John Poole at 803-898-4212 to determine whether permits are necessary.
4. The holes and burrows must be evaluated by a qualified SC licensed professional engineer to determine whether the structural stability of the dam is affected.
All harmful animal species must be removed from the dam in a legal manner to prevent further damage. Repairs must be made to the holes and burrows.
Depending on the extent of the damage, permits may be necessary for the repairs; contact John Poole at 803-898-4212to determine whether permits are necessary.
5. This issue must be evaluated by a qualified SC licensed professional engineer to determine whether the backed-up water is causing any concerns
5. This issue must be evaluated by a qualified SC licensed professional engineer to determine whether the backed-up water is causing any concerns with the safe operation of the dam and whether additional outlet protection is necessary to prevent erosion under the pipe. You should work with the
5. This issue must be evaluated by a qualified SC licensed professional engineer to determine whether the backed-up water is causing any concerns with the safe operation of the dam and whether additional outlet protection is necessary to prevent erosion under the pipe. You should work with the downstream property owners and the County to address the problem.

### 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.

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Inspection Report for South Carolina Regulated Dams and Impoundment Structures Regulations R.72-1 through R.72-9		
Section I (Owner's Inforn	nation)		
A. Dam Number: <b>D</b> <u>2841</u> & H	azard Class <sup>2</sup> B. Name of Dam: Swan Lake		
C. Inspection Date ( <u>04/28</u> /20 <u>1</u>	5) & Time: <u>11:40 a.m.</u> D. Date of Last Inspection: ( <u>02 / 23 / 2012</u> )		
E. Location-County/City: Greenville	/ Greenville F. EQC Regional Office: Upstate EQC Greenville		
G. Inspector's Name: Melissa Dawki	ns		
H. Owner's Name: Furman University			
I. Contact Person (if different fro	m above): Bernie Stanton		
J. Dam Owner's or Contact Pers	son's Phone Numbers: Home ()		
	Office ( <u>864</u> ) <u>294</u> - <u>3287</u>		
K. Dam Owner's or Contact Per Address 1 3300 Poinsett Highway	Other ( <u>864-363-6156 (cell)</u> son's mailing address:		
Address 2 (optional)			
City Greenville	, State <u>SC</u> Zip Code <u>29613</u>		
Section II (Dam Condition General Condition Assessment a) Satisfactory b) F Section III (Dam Inspection A. Dam Crest	nt (Select one of the following):         Fair       c) Poor       ✓       d) Unsatisfactory       e) Not Rated         On Checklist)		
ii. Animal activity observed?			
iii. Any obvious alteration or ro	nairs made? None observed		
in. Any obvious alteration of re-	III. Any obvious alteration or repairs made? None observed		
v. Any visible settlement, misa they do not widen.	IIGNMENT OF CRACKS? Cracks were observed in the road surface. Monitor all cracks to ensure that		
DHEC 2604 (Rev 11/2011)			

### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? The thick vegetation, including weeds, small trees, shrubs, brush, and other deleterious vegetation, must be

cut and removed. Small bare areas were observed. Monitor these areas and re-seed as necessary. Large trees (diameter>4") were also observed. See Section IV, item 1.

ii. Animal activity observed? None observed

iv. Erc	Sion observed on upstream slope? Yes, erosion and undulations were observed along the water's edge. Monitor this area to ens
that it does	not worsen. If it does, then additional slope protection may be needed. Erosion was observed where the road pipes empty onto the slope. See Section IV, items 2 and
v. Set	lement or cracks visible in slope? Sloughing/ erosion (not active) was observed on the upstream slope, primarily around the tree roo
Monitor th	ese areas to ensure they do not worsen.
C. Dow	n Stream Slope
i. Veç	etation (grass, trees weeds)? The thick vegetation, including weeds, small trees, shrubs, brush, and other deleterious vegetation, must
cut and re	moved. Large trees (diameter>4"), dead trees, fallen trees, and decaying stumps were also observed. See Section IV, items 1, 4, 5, and 6.
ii. Ani	mal activity observed? None observed but could not fully inspect because of thick vegetation
iii. An	y obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation
<u> </u>	
IV. Erc	SION Observed on down stream Slope? Erosion was observed where the road pipes/ curb cuts empty onto the slope. On the
side, flows	from one of the curb cuts has caused more significant erosion and these areas need to be repaired. See Section IV, item 2 and 7.
v. Set	IEMENT OF CFACKS VISIBLE IN SIOPE? None observed but could not fully inspect because of thick vegetation
vi. Toe	e drains flowing? Yes, 2 pipes were observed on the right side of the concrete walls for the spillway. Both were trickling.
vii. An	y seepage observed? If so, describe location, Yes, actively flowing seepage was observed on the right side, along the
flow ra	ite, and any turbidity or color within the flow: of the slope and around the outlet structure (from the bank on right side).
limits of th	e seepage areas should be marked so that you can determine if the area is increasing in size. See Section IV, item 8.
iii. Any	noticeable problems with debris? A small amount of debris was observed. This should be removed as part of routine
maintenar	ice.
IV. IS V	alve ar rate present?
	ralve or gate present? Yes, according to Mr. Stanton, it has been operated within the last 10 years but is not operated regularly.
E. Out	raive or gate present?       Yes, according to Mr. Stanton, it has been operated within the last 10 years but is not operated regularly.         et Pipe       water visibly flowing or leaking outside of the discharge pipe?         Flowing water prevented inspection
E. Out i. Any ii. Des	raive or gate present?       Yes, according to Mr. Stanton, it has been operated within the last 10 years but is not operated regularly.         et Pipe       water visibly flowing or leaking outside of the discharge pipe?         Flowing water prevented inspection         cribe any deflection or damage observed to the pipe:
E. Out i. Any ii. Des	raive or gate present?       Yes, according to Mr. Stanton, it has been operated within the last 10 years but is not operated regularly.         et Pipe       water visibly flowing or leaking outside of the discharge pipe?         Flowing water prevented inspection       Flowing water prevented inspection         cribe any deflection or damage observed to the pipe:       Flowing water prevented inspection of the pipe it         supports under the concrete slab near the end of the outlet pipe are deteriorating and may be need to be replaced. Monitor their condition. See Section IV, ite
E. Out i. Any ii. Des The woode iii. Vis	raive or gate present?       Yes, according to Mr. Stanton, it has been operated within the last 10 years but is not operated regularly.         et Pipe       water visibly flowing or leaking outside of the discharge pipe?       Flowing water prevented inspection         cribe any deflection or damage observed to the pipe:       Flowing water prevented inspection of the pipe it         supports under the concrete slab near the end of the outlet pipe are deteriorating and may be need to be replaced. Monitor their condition. See Section IV, ite         ble condition of outlet channel:       Significant erosion of the banks was observed to the right and left of the outlet. Monitor this are
E. Out i. Any ii. Des The woode iii. Vis ensure it o	raive or gate present?       Yes, according to Mr. Stanton, it has been operated within the last 10 years but is not operated regularly.         et Pipe       water visibly flowing or leaking outside of the discharge pipe?       Flowing water prevented inspection         cribe any deflection or damage observed to the pipe:       Significant erosion of the banks was observed to the right and left of the outlet. Monitor this are osen of worsen. If it does, then slope protection/ armor may be needed.
E. Out i. Any ii. Des The woode iii. Vis ensure it o F. Auxi i. Notio	raive or gate present?       Yes, according to Mr. Stanton, it has been operated within the last 10 years but is not operated regularly.         et Pipe       Flowing water prevented inspection         water visibly flowing or leaking outside of the discharge pipe?       Flowing water prevented inspection         cribe any deflection or damage observed to the pipe:       Flowing water prevented inspection of the pipe it         supports under the concrete slab near the end of the outlet pipe are deteriorating and may be need to be replaced. Monitor their condition. See Section IV, ite         ble condition of outlet channel:       Significant erosion of the banks was observed to the right and left of the outlet. Monitor this are         loes not worsen. If it does, then slope protection/ armor may be needed.       Image: No emergency spillway observed         iary (Emergency) Spillway       No emergency spillway observed
E. Out i. Any ii. Des The woode iii. Vis ensure it o F. Auxi i. Notic	raive or gate present? Yes, according to Mr. Stanton, it has been operated within the last 10 years but is not operated regularly. et Pipe water visibly flowing or leaking outside of the discharge pipe? Flowing water prevented inspection cribe any deflection or damage observed to the pipe: <a href="https://www.self.com">https://www.self.com</a> Flowing water prevented inspection cribe any deflection or damage observed to the pipe: <a href="https://www.self.com">https://www.self.com</a> Flowing water prevented inspection of the pipe it supports under the concrete slab near the end of the outlet pipe are deteriorating and may be need to be replaced. Monitor their condition. See Section IV, ite ble condition of outlet channel: Significant erosion of the banks was observed to the right and left of the outlet. Monitor this are loes not worsen. If it does, then slope protection/ armor may be needed.   iary (Emergency) Spillway reable obstructions to flow? No emergency spillway observed
E. Out i. Any ii. Des iii. Des iii. Vis ensure it o F. Auxi i. Notio	raive or gate present?       Yes, according to Mr. Stanton, it has been operated within the last 10 years but is not operated regularly.         et Pipe       water visibly flowing or leaking outside of the discharge pipe?       Flowing water prevented inspection         cribe any deflection or damage observed to the pipe:       Flowing water prevented inspection of the pipe it         n supports under the concrete slab near the end of the outlet pipe are deteriorating and may be need to be replaced. Monitor their condition. See Section IV, ite         ble condition of outlet channel:       Significant erosion of the banks was observed to the right and left of the outlet. Monitor this are         ioes not worsen. If it does, then slope protection/ armor may be needed.       Itary (Emergency) Spillway         eable obstructions to flow?       No emergency spillway observed
E. Out i. Any ii. Des The woode iii. Vis ensure it o F. Auxi i. Notic ii. Anin iii. Any	raive or gate present? Yes, according to Mr. Stanton, it has been operated within the last 10 years but is not operated regularly. et Pipe water visibly flowing or leaking outside of the discharge pipe? Flowing water prevented inspection cribe any deflection or damage observed to the pipe: Flowing water prevented inspection of the pipe it regularly under the concrete stab near the end of the outlet pipe are deteriorating and may be need to be replaced. Monitor their condition. See Section IV, ite ble condition of outlet channel: Significant erosion of the banks was observed to the right and left of the outlet. Monitor this are loses not worsen. If it does, then slope protection/ armor may be needed. liary (Emergency) Spillway eable obstructions to flow? No emergency spillway observed nal activity observed? No emergency spillway observed noticeable deterioration in the approach or discharge channel? No emergency spillway observed
E. Out i. Any ii. Des iii. Des iii. Vis ensure it o F. Auxi i. Notic ii. Anin iii. Any iv. Any	raive or gate present?       Yes, according to Mr. Stanton, it has been operated within the last 10 years but is not operated regularly.         et Pipe       Flowing water prevented inspection         water visibly flowing or leaking outside of the discharge pipe?       Flowing water prevented inspection         cribe any deflection or damage observed to the pipe:       Flowing water prevented inspection of the pipe it         nupports under the concrete slab near the end of the outlet pipe are deteriorating and may be need to be replaced. Monitor their condition. See Section IV, lite         ble condition of outlet channel:       Significant erosion of the banks was observed to the right and left of the outlet. Monitor this are         loses not worsen. If it does, then slope protection/ armor may be needed.       Image: No emergency spillway observed         inal activity observed?       No emergency spillway observed         noticeable deterioration in the approach or discharge channel?       No emergency spillway observed         visible deterioration of structure's crest?       No emergency spillway observed

### F. Auxiliary (Emergency) Spillway continued

v. If applicable, any observed exposure of rebar reinforcement? No emergency spillway observed

vi. If applicable, any visible leakage below concrete spillway? No emergency spillway observed

### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes, residences at 52, 70, 72, 74 Montague Circle, Greenville SC 29609.

### I. Emergency Action Plan (EAP)

i. Emergency Action Plan provided by owner?

No, updated EAP must be submitted on or before 9/17/15.

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 larger trees (on the entire dam and extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater)

must be evaluated by a qualified South Carolina licensed professional engineer to determine if they should be removed. A tree management

plan must be developed to address the long-term plans for tree removal. Permits may be necessary for removal of the large trees; contact David

Graves at 803-898-4398 to determine whether permits are necessary.

2. Erosion was observed where the road pipes/ curb cuts empty onto the slopes (minor on the upstream slope, more pronounced on the

downstream slope). These pipes should be extended to empty directly into the lake for the upstream slope and extended beyond

the toe of the slope for the downstream slope or the flow path stabilized to these same points (from pipe outlets into lake

for upstream and from pipe outlets to beyond toe of slope for downstream).

See attached sheet for additional comments

## 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.

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

) H E C MOTE PROTECT PROSPER	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Info	rmation)	
A. Dam Number: <b>D</b> <u>2853</u> &	Hazard Class <sup>2</sup>	B. Name of Dam: Paris Mountain Reservoir 3 (formerly GWS)
C. Inspection Date ( <u>12/29</u> /20	0 <u>1</u> 4) & Time: <u>10:15 a.m.</u>	D. Date of Last Inspection: ( <u>12/2/2011</u> )
E. Location-County/City: Green	ville / Greenville	F. EQC Regional Office: Upstate EQC Greenville
G. Inspector's Name: Melissa Da	wkins (Kyle Lancaster also present)	
H. Owner's Name: S.C. Departme	nt of Parks, Recreation, & Tourism	
I. Contact Person (if different	from above): Jason Hege (Pa	k Manager)
J. Dam Owner's or Contact P	erson's Phone Numbers:	Home ()
		Office ( <u>864</u> ) <u>244</u> - <u>5565</u>
K. Dam Owner's or Contact F	erson's mailing address:	Other ( <u>864</u> ) <u>421</u> - <u>2852</u>
Address 1 2401 State Park Ros	d	
Address 2 (optional)		
City Greenville	, S	tate <u>SC</u> Zip Code <u>29609</u>
Section II (Dam Condition         General Condition Assessm         a) Satisfactory         b         Section III (Dam Inspect         A. Dam Crest         i. Vegetation (grass, trees vertex is activities	on) hent (Select one of the f ) Fair ) Fair c) Poor tion Checklist) veeds)? Grass in good condition	ollowing): d) Unsatisfactory e) Not Rated
ii. Animal activity observed	None observed	
iii. Any obvious alteration or	repairs made? None obs	erved
iv. Erosion noticed on crest	? None observed	
v Any visible settlement m	salignment or cracks?	n area of standing water, indicating a depressed area, was observed on the left side

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Small amounts of grass and weeds were observed growing in cracks in the concrete slope protection.

1. Vegetation (grass, inces weeds): Sinai and weeds were observed growing in clacks in the concrete slope protection.
These should be cut or treated. On the right side, woody vegetation, which prevented complete inspection, was observed. This must be cut and removed.
II. Animal activity observed? None observed
iii. Any obvious alterations or repairs made? None observed
iv. Erosion observed on upstream slope? None observed
v. Settlement or cracks visible in slope? Yes, holes and cracks were observed in the concrete at the water's edge. These should be marked
and monitored to ensure they do not increase in size or depth.
C. Down Stream Slope
i. Vegetation (grass, trees weeds)? Weeds, small trees, shrubs, brush, and other deleterious vegetation were observed growing in the
riprap that covers the downstream slope; this vegetation must be cut and removed. See Section IV, items 1 and 2.
ii. Animal activity observed? None observed but could not fully inspect because of steep slopes and vegetation
iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of steep slopes and vegetation
iv. Erosion observed on down stream slope? None observed but could not fully inspect because of steep slopes and vegetation
v. Settlement or cracks visible in slope? Some sloughing was observed along the slope near the crest. Monitor this area to ensure
that it does not worsen. If it does, then repairs need to be done; permits may be necessary for those repairs.
vi. Toe drains flowing? None seen
vii Any seenage observed? If so describe location Yes a very wet area (approximately 40' Ly 20' W) was observed just beyond the
flow rate and any turbidity or color within the flow.
Flowing seenage was observed along both groins (more on left). See Section IV, items 3 and 4
D Primary Spillway
i. Any visible deterioration of structure? No primary spillway was visible in the reservoir.
ii. Is there an obvious need to repair or replace trash rack? No primary spillway was visible in the reservoir.
iii. Any noticeable problems with debris? No primary spillway was visible in the reservoir.
iv. Is valve or gate present? No primary spillway was visible in the reservoir.
E. Outlet Pipe i. Any water visibly flowing or leaking outside of the discharge pipe? The concrete arch pipe was absorved. No flower ware
flowing outside the pipe, however, thick vergetation and flowing water in the pipe provented a complete inspection. The tire is the pipe should be removed
ii. Describe any deflection or damage observed to the pipe: Water was visible at some of the seams in the pipe. The
entire length of pipe could not be observed. Based on the age of the structure, the Department recommends a complete inspection be done to look for deterioration.
iii. Visible condition of outlet channel: Little to no erosion was observed. Woody vegetation and shrubs were present at the outlet from the
arch pipe. Vegetation within 25' from the pipe outlet should be cleared so the outlet can be inspected regularly and flows are not impeded.
F. Auxiliary (Emergency) Spillway i. Noticeable obstructions to flow? Yes, logs and debris were present in the spillway. These must be removed. Vegetation was observed
at the entrance to the spillway. This must be cut and removed.
ii. Animal activity observed? None observed
III. Any noticeable deterioration in the approach or discharge channel?
of the channel could not be observed because of leaves and debris. The top portions of the walls were missing in some areas. The deterioration should be monitored.
IV. ANY VISIDIE DETERIORATION OF STRUCTURE'S CREST? Some deterioration of the walls were observed. The bottom of the channel could

not be observed because of leaves and debris. The top portions of the walls were missing in some areas. The deterioration should be monitored.

because of leaves and debris.	
vi. If applicable, any visible leakage below concre	ete spillway? None observed
H. Downstream/Hazard Class Issues i. Any noticeable changes immediately downstrea	am of the dam that affects the hazard classification?
Yes, residence at 4751 State Park Road. D-4409 (Class 3	3) is located adjacent to this house, but it appears that that dam may
also be breached if this were to fail.	
I. Emergency Action Plan (EAP) i. Emergency Action Plan provided by owner?	No, EAP must be submitted on or before 6/18/15.
ii. Does EAP contains emergency alert notification	on plan? If so, when was it last updated?

The bottom of the channel could not be observed

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

# Section IV (Conclusions)

#### General comments and recommendations:

F. Auxiliary (Emergency) Spillway continued

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

1. The thick vegetation, including small trees, must be cut and removed from the entire dam and extending one-half the height of the dam beyond

the toe or 25' beyond the toe, whichever is greater. Portions of the dam could not be inspected due to the thick vegetation. The vegetation must remain at a

manageable level so that you can perform complete inspections of the dam and associated structures on a regular basis to ensure safe operation of the dam.

2. Large trees (diameter >4") were observed on the downstream slope and along both groins. The larger trees (on the entire dam and extending one-half

the height of the dam beyond the toe or 25' beyond the toe, whichever is greater) must be evaluated by a qualified South Carolina licensed professional

engineer to determine if they should be removed. A tree management plan must be developed to address the long-term plans for tree removal. Permits

may be necessary for removal of the large trees; contact John Poole at 803-898-4212 to determine whether permits are necessary.

3. The limits of the wet area should be marked so that you can determine if the area is increasing in size. This area should be monitored regularly to ensure

that the flow rate does not change and that the water does not become turbid. This would indicate a very serious situation and the Department should be notified immediately.

4. The limits of the actively flowing seeps should be marked so that you can determine if the areas are increasing in size. A plan must be developed to measure

seepage (flow rate and turbidity) in these areas at least monthly. Submit the plan to the Permitting Section in Columbia for approval.

The seepage measurements must be recorded at least monthly and should be correlated to the stage in the reservoir at the time of the measurement.

## Preliminary Dam Inspection Disclaimer:

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## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Inspection Report for South Carolina Regulated Dams and Impoundment Structures Regulations R.72-1 through R.72-9	
Section I (Owner's Infor	mation)	
A. Dam Number: <b>D</b> <u>2854</u> &	Hazard Class <sup>2</sup> B. Name of Dam: Mountain Lake	
C. Inspection Date ( <u>12/29</u> /20	<u>14</u> ) & Time: <u>12:10 p.m.</u> D. Date of Last Inspection: ( <u>11/22/2011</u> )	
E. Location-County/City: Greenvi	Ile / Greenville F. EQC Regional Office: Upstate EQC Greenville	
G. Inspector's Name: Melissa Dav	kins (Kyle Lancaster also present)	
H. Owner's Name: S.C. Departmen	t of Parks, Recreation, & Tourism	
I. Contact Person (if different f	rom above): Jason Hege (Park Manager)	
J. Dam Owner's or Contact Pe	rson's Phone Numbers: Home ()	
	Office ( <u>864</u> ) <u>244</u> - <u>5565</u>	
	Other ( <u>864</u> ) <u>421</u> - <u>2852</u>	
K. Dam Owner's or Contact Pe	erson's mailing address:	
Address 1 2401 State Park Road	1	
Address 2 (optional)		
	, Oldlo <u></u>	
Section II (Dam Condition General Condition Assessm a) Satisfactory b)	on) ent (Select one of the following): Fair c) Poor 🖌 d) Unsatisfactory e) Not Rated	
Section III (Dam Inspect	ion Checklist)	
A. Dam Crest i. Vegetation (grass, trees w accessed, so it was difficult to tell the exten ii. Animal activity observed?	eeds)?       Grass and weeds were observed growing on the crest on the right side. The right side could not be         at of the vegetation near the edge of the dam. This vegetation must be cut and removed or treated.         None observed; however, the right side could not be accessed.	
iii. Any obvious alteration or repairs made? None observed; however, the right side could not be accessed.		
iv. Erosion noticed on crest? None observed; however, the right side could not be accessed.		
v. Any visible settlement, mis adjacent to the spillway, the first block app DHEC 2604 (Rev 11/2011)	eared to have been damaged at some time in the past and vegetation was growing in this area.	

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Some grass and weeds were observed growing in cracks on the upstream face (more on the right side than the left). The vegetation must be cut and removed or treated.

ii. Animal activity observed? None observed?	erved; however, the right side could not be accessed.
--	---

iii. Any obvious alterations or repairs made? None observed; however, the right side could not be accessed.

iv. Erosion observed on upstream slope? None observed; however, the right side could not be accessed.

v. Settlement or cracks visible in slope? None observed; however, the right side could not be accessed.

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Grass and weeds were observed growing in cracks. This vegetation must be cut and removed or treated. Thick vegetation, including trees, brush, and other deleterious vegetation, was observed along the toe on the right side. See Section IV, items 1 and 2.

ii. Animal activity observed? None observed; however, the right side could not be accessed.

iii. Any obvious alterations or repairs made? None observed; however, the right side could not be accessed.

iv. Erosion observed on down stream slope? None observed; however, the right side could not be accessed.

v. Settlement or cracks visible in slope? Yes, water was observed flowing through cracks in the structure, toward the top of the dam on the left side. The right side could not accessed. See Section IV, item 3.

vi. Toe drains flowing? None seen

vii. Any seepage observed? If so, describe location, Yes, significant flows were observed from the valve housing; these flows flow rate, and any turbidity or color within the flow:

appeared to have increased since the previous inspection. See Section

#### IV, item 4.

#### **D. Primary Spillway**

- i. Any visible deterioration of structure?
- None observed; however, could not fully inspect because of flowing water

ii. Is there an obvious need to repair or replace trash rack? Not applicable

iii. Any noticeable problems with debris? Yes, a small amount of debris was observed in the spillway. This should be removed on a regular

basis. A large tree was observed at the bottom of the spillway; this should be removed.

iv. Is valve or gate present? Yes, according to sign present at dam, valve is deteriorated and inoperable.

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? The plugged low-level outlet to the left of the spillway was

observed as the outlet pipe. Significant flows were observed from the pipe; these flows appeared to have increased since the previous inspection. See Section IV, item 5.

ii. Describe any deflection or damage observed to the pipe: Pipe was plugged so could not observe; however, increased

flows were observed, along with a large amount of iron bacteria in the area around the pipe.

iii. Visible condition of outlet channel: Good with little to no erosion. Some debris was present; this should be removed on a regular basis.

### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? Not applicable, no emergency spillway.

ii. Animal activity observed? Not applicable, no emergency spillway.

iii. Any noticeable deterioration in the approach or discharge channel? Not applicable, no emergency spillway.

iv. Any visible deterioration of structure's crest?

DHEC 2604 (Rev 11/2011)

Not applicable, no emergency spillway.

### F. Auxiliary (Emergency) Spillway continued

v. If applicable, any observed exposure of rebar reinforcement? Not applicable, no emergency spillway.

vi. If applicable, any visible leakage below concrete spillway? Not applicable, no emergency spillway.

#### H. Downstream/Hazard Class Issues

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

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

i. Emergency Action Plan provided by owner?

No, updated EAP must be submitted on or before 6/18/15.

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 thick vegetation, including weeds, small trees, shrubs, brush, and other deleterious vegetation, must be cut and removed from the entire dam and

extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater. The right abutment was very steep and the

thick vegetation prevented inspection of the right side. The engineer's thorough inspection must include a complete inspection of the right side, and the

report must include recommendations for vegetation removal and control. The vegetation must remain at a manageable level so that you can

perform complete inspections of the dam and associated structures on a regular basis to ensure safe operation of the dam.

2. If larger trees are present on the right side (diameter >4"), then those trees (on the entire dam and extending one-half the height of the dam

beyond the toe or 25' beyond the toe, whichever is greater) must be evaluated by a qualified South Carolina licensed professional engineer

to determine if they should be removed. A tree management plan must be developed to address the long-term plans for tree removal. Permits

may be necessary for removal of the large trees; contact John Poole at 803-898-4212 to determine whether permits are necessary.

See attached sheet for additional comments.

## 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.

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Inspection Report for South Carolina Regulated Dams and Impoundment Structures Regulations R.72-1 through R.72-9				
Section I (Owner's Infor	Section I (Owner's Information)				
A. Dam Number: <b>D</b> <u>2857</u> &	Hazard Class <sup>2</sup> B. Name of Dam: Bruce Lake				
C. Inspection Date ( <u>08/19</u> /20	14) & Time: 10:30 a.m. D. Date of Last Inspection: ( <u>N/A/_/_/</u> )				
E. Location-County/City: Greenvil	Ie / Greenville F. EQC Regional Office: Upstate/ Greenville				
G. Inspector's Name: Melissa Daw	kins, John Cobb				
H. Owner's Name: JOPE Inc.					
I. Contact Person (if different fr	om above):				
J. Dam Owner's or Contact Pe	rson's Phone Numbers: Home ( )				
	Office ()				
K. Dom Owner's or Contact Bo	Other ( )				
Address 1, 2705 Poinsett Highwa					
Address 7 2705 Follisett Highwa	y				
	State SC Zin Code 29609				
Section II (Dom Conditio	<b>ND</b> )				
General Condition Assessme         a) Satisfactory         b)         Section III (Dam Inspect)	ent (Select one of the following): Fair c) Poor d) Unsatisfactory 🖌 e) Not Rated ion Checklist)				
A. Dam Crest i. Vegetation (grass, trees we must be cut and removed. Portions of the dam co ii. Animal activity observed?	Eeds)?       Thick vegetation, including weeds, small trees, shrubs, brush, poison ivy, and other deleterious vegetation, uld not be inspected due to the thick vegetation. Numerous large trees were also observed. See Section IV, items 1, 2, and 3.         None observed but could not fully inspect because of thick vegetation				
iii. Any obvious alteration or r	iii. Any obvious alteration or repairs made? None observed but could not fully inspect because of thick vegetation				
iv. Erosion noticed on crest? None observed but could not fully inspect because of thick vegetation					
v. Any visible settlement, mis the length of the crest. This could be by des DHEC 2604 (Rev 11/2011)	alignment or cracks? The crest of the dam is not level. There were multiple elevation changes along sign or due to settling or overtopping.				

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Same as crest (Section III.A.i). See Section IV, items 1, 2, and 3. Very little freeboard (approximately

9") was observed in some places, so there was not much of an upstream slope to o	bserve.
--	---------

ii. Animal activity observed? Yes, animal trails into the lake were observed.

iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation

iv. Erosion observed on upstream slope? None observed but could not fully inspect because of thick vegetation

v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Same as crest (Section III.A.i). See Section IV, items 1, 2, and 3.

ii. Animal activity observed? Yes, holes, possibly animal burrows were observed throughout the downstream slope (e.g., on the upstream side of the channel from the emergency spillway)

iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation

iv. Erosion observed on down stream slope? Yes, the channel from the concrete spillway drops off partway down, and significant erosion was observed. Flows then appear to go underground, in an area of erosion, and beneath a large tree. Could not fully inspect because of thick vegetation.

v. Settlement or cracks visible in slope? Yes, a large hole was observed above outlet pipe on the downstream slope. Could not fully inspect because of thick vegetation

vi. Toe drains flowing? None observed but could not fully inspect because of thick vegetation

vii. Any seepage observed? If so, describe location, None observed but could not fully inspect because of thick vegetation flow rate, and any turbidity or color within the flow:

#### **D. Primary Spillway**

i. Any visible deterioration of structure? None observed from crest of dam

No trash rack installed. No debris was present, but it appears

Pipe joints are visibly separated. A cavity was

that a trash rack should be installed.

iii. Any noticeable problems with debris? No debris was present.

ii. Is there an obvious need to repair or replace trash rack?

iv. Is valve or gate present? None observed

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? None observed but could not fully inspect because of

thick vegetation. There was significant flow through the outlet pipe, even though the top of the riser was at or above the water surface elevation.

ii. Describe any deflection or damage observed to the pipe:

observed above the outlet pipe.

iii. Visible condition of outlet channel: Erosion was visible in the channel coming from the concrete spillway.

### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? Yes, debris (limbs, trees, etc.) was present in the channel.

ii. Animal activity observed? None observed but could not fully inspect because of thick vegetation

iii. Any noticeable deterioration in the approach or discharge channel? Yes, partway down the channel, the concrete

spillway drops off and significant erosion was observed. This eroded channel continues and flows appear to go underground, below a large, leaning tree.

iv. Any visible deterioration of structure's crest? Could not fully inspect because of thick vegetation

of thick vegetation	
vi. If applicable, any visible leakage below concrete spillway?	Could not fully inspection because of thick vegetation
H. Downstream/Hazard Class Issues	
i. Any noticeable changes immediately downstream of the dam	that affects the hazard classification?
None observed from the crest	

### I. Emergency Action Plan (EAP)

i. Emergency Action Plan provided by owner?

F. Auxiliary (Emergency) Spillway continued

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

No, EAP is required to be submitted on or before 9/29/14.

None observed but could not fully inspect because

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:

The concrete spillway on the left-hand side was evaluated as the auxiliary (emergency) spillway in Section III.F; however,

the elevation of the concrete spillway is below the riser. The riser structure out in the lake was evaluated as the primary

spillway in Section III.D. During the inspection, flows were going through the concrete spillway and only trickling through the

riser structure (the water surface elevation was at the top of the riser).

1. Once the thick vegetation has been removed, an appropriate ground cover must be established. Grass is the ideal ground

cover for a dam.

2. The vegetation must remain at a manageable level so that you can perform complete inspections of the dam and associated

structures on a regular basis to ensure safe operation of the dam.

3. Removal of larger trees needs to be evaluated by a licensed SC professional engineer. Permits may be necessary for

removal of the large trees; contact John Poole at 803-898-4212 to determine whether permits are necessary.

## Preliminary Dam Inspection Disclaimer:

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## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DHEC Regulate	ry Inspection Report for South Carolina ed Dams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Information)	
A. Dam Number: <b>D</b> $2859$ & Hazard Class <sup>2</sup>	B. Name of Dam: Prince Lake
C. Inspection Date ( <u>12/10</u> /20 <u>13</u> ) & Time: <u>11:00 a.m</u>	D. Date of Last Inspection: ( <u>12_/09_/2010_</u> )
E. Location-County/City: Greenville / Piedmont	F. EQC Regional Office: Upstate EQC Greenville
G. Inspector's Name: Melissa Dawkins	
H. Owner's Name: Jerry & Brenda Cooper, Henry Jr. & Fran Her	rlong et al, Henry Jr. & Fran Herlong, Georgia Brown Trust
I. Contact Person (if different from above): Jerry Coop	er
J. Dam Owner's or Contact Person's Phone Numb	bers: Home ( <u>864_</u> ) <u>277_</u> - <u>1583</u> _
	Office ()
	Other ( <u>864</u> ) <u>230</u> - <u>4212</u>
K. Dam Owner's or Contact Person's mailing addre	
Address 1 _110 Beechwood Dr., Piedmont 29673 (Cooper); 12	26 Beechwood Dr., Piedmont 29673 (Herlong et al.),
Address 2 (optional) 300 E. Washington St., Greenville 2960	01 (Herlong); 122 Beechwood Dr., Piedmont 29673 (Brown Trust)
Section II (Dam Condition)         General Condition Assessment (Select one of t         a)       Satisfactory       b) Fair       c) Pool         Section III (Dam Inspection Checklist)	t <b>he following):</b> or d) Unsatisfactory e) Not Rated
A. Dam Crest i. Vegetation (grass, trees weeds)? Road in place ac driveway and wall. See Section IV, item 1. ii. Animal activity observed? None observed	cross the dam. A large tree was observed on the right side of the dam between the
iii. Any obvious alteration or repairs made? None	e observed
iv. Erosion noticed on crest? None observed	
v. Any visible settlement, misalignment or cracks Monitor these cracks to ensure that they do not widen. If any changes in DHEC 2604 (Rev 11/2011)	Some cracks parallel to the direction of flow through the dam were observed. In the widths are observed, then you should contact and engineer to evaluate them.

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Riprap and grass were observed. On the left side where the tree fell, grass needs to be re-established.

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? On the left side, repairs to the wall that was damaged by the fallen tree were

observed. No repairs to the dam were observed.

iv. Erosion observed on upstream slope? Small bare areas were observed. Monitor these areas and re-seed as necessary.

v. Settlement or cracks visible in slope? None observed

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Thick vegetation, including weeds, small trees, brush, and other deleterious vegetation, must be cut and removed. Portions of the dam could not be inspected due to the thick vegetation. A few large trees were also observed on the left side. See Section IV, items 1, 2, and 3. ii. Animal activity observed? Could not fully inspect because of thick vegetation.

iii. Any obvious alterations or repairs made? Could not fully inspect because of thick vegetation.

 iv. Erosion observed on down stream slope?
 Some sloughing was observed but could not fully inspect because of thick vegetation.

 Bare/ scalped areas were observed on the right side where the vegetation had been cut. Monitor these areas to ensure that grass is re-established and erosion does not occur.

 v. Settlement or cracks visible in slope?
 Ruts and sloughing were observed but could not fully inspect due to thick vegetation, possibly due to steep slopes. A qualified licensed SC engineer must evaluate these areas to determine whether the ruts and steep slopes need to be flattened/ smoothed out/ repaired.

 vi. Toe drains flowing?
 None observed but could not fully inspect because of thick vegetation.

 vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow:
 Yes, an area (approximately 75' x 30') to the right of the outlet pipe was observed.

 This was also noted in the 2010 report. The area was not flowing; however, the ground was soggy. The entire slope could not be inspected due to thick vegetation. This area must be monitored. See Section IV, item 4.

#### **D. Primary Spillway**

i. Any visible deterioration of structure? None

None observed

ii. Is there an obvious need to repair or replace trash rack? No trash rack; however, according to Mr. Cooper, a strainer was

recently added to the end of the siphon. He also indicated that the a bend was added and the bottom elevation was changed. See Section IV, item 5. iii. Any noticeable problems with debris? None observed

iv. Is valve or gate present? According to Mr. Cooper, the gate valve was decommissioned approximately 2-1/2 years ago. See Section IV, item 5.

With the gate valve decommissioned, what is the current plan to drain the lake, if that were necessary?

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? None observed

ii. Describe any deflection or damage observed to the pipe:

Could not observe because of flowing water

iii. Visible condition of outlet channel: A large tree rootball was observed approximately 30' downstream. This could act as a constriction

in times of high flows.

### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? A partial berm was in place on the downstream side of the 3 pipes. This may act as an obstruction.

Remove debris at pipe inlets and outlets.

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? None observed

iv. Any visible deterioration of structure's crest? The la

The last joints of all 3 pipes were separated.

F. Auxiliarv	(Emergency)	Spillway	continued
		• p · · · · · · · · · · · · ·	

v. If applicable, any observed exposure of rebar reinforcement? Not app

vi. If applicable, any visible leakage below concrete spillway? Not applicable

#### H. Downstream/Hazard Class Issues

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

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

i. Emergency Action Plan provided by owner?

No, EAP must be submitted on or before 10/8/14.

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 larger trees must be evaluated by a qualified South Carolina licensed professional engineer to determine if they should be removed.

Permits may be necessary for removal of the large trees; contact John Poole at 803-898-4212 to determine whether permits are necessary.

2. Once the thick vegetation has been removed, an appropriate ground cover must be established. Grass is the ideal ground cover for a dam.

3. The vegetation must remain at a manageable level so that you can perform complete inspections of the dam and associated structures

on a regular basis to ensure safe operation of the dam.

4. If any changes to the rate of seepage and size of the area are observed, then you must have it evaluated by a qualified, licensed SC

engineer to determine whether repairs are necessary.

5. According to Mr. Cooper, changes/ repairs were made to the siphon and gate valve since the last inspection. Permits are required for all changes to

the dam and its structures. Provide all documentation related to this work to the Department. A retroactive permit for the work may be required.

6. On the left side of the dam, direct runoff from the driveway area away from the downstream slope of the dam.

7. On the left side, a pipe that appears to be draining into the lake has separated joints. This must be evaluated by a qualified South Carolina

licensed professional engineer.

### Preliminary Dam Inspection Disclaimer:

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DHEC 2604 (Rev 11/2011)

Not applicable

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DHEC ROMOTE PROTECT PROSPER	Preliminary Inspection Report for South Carolina Regulated Dams and Impoundment Structures Regulations R.72-1 through R.72-9					
Section I (Owner's Info	Section I (Owner's Information)					
A. Dam Number: <b>D</b> <u>2863</u> 8	Hazard Class <sup>2</sup>	B. Name of Dam: <u>Ridgill Lake Dam</u>				
C. Inspection Date $(03/01/20)$	) <u>1</u> 3) & Time: <u>11:30 a.m.</u>	D. Date of Last Inspection: (01/12/2010_)				
E. Location-County/City: Green	ville / Travelers Rest	F. EQC Regional Office: Greenville				
G. Inspector's Name: Melissa Da	wkins					
H. Owner's Name: Richard Ridgill						
I. Contact Person (if different	from above): Richard Ridgill or Bo	byd Harrison (for access)				
J. Dam Owner's or Contact P	erson's Phone Numbers:	Home ( <u>864_)</u> <u>320_</u> - <u>5055_</u>				
		Office ()				
K. Dam Owner's or Contact F Address 1 <u>2600 Highway 11</u> Address 2 (optional)	erson's mailing address:	Other ( <u>864</u> _) <u>895-5148 (Boyd)</u>				
City <u>Travelers Rest</u>	, Sta	te <u>SC</u> Zip Code <u>29690</u>				
Section II (Dam Condition General Condition Assessm a) Satisfactory b Section III (Dam Inspect A. Dam Crest i. Vegetation (grass, trees v	on) hent (Select one of the fol ) Fair (C) Poor ( tion Checklist) veeds)? Grass and gravel road be	lowing): d) Unsatisfactory e) Not Rated				
ii Animal activity observed	ii. Animal activity chaomyod? Nere charved					
iii Any obvious alteration or	renairs made? None observe	ed				
iv Erosion noticed on creat	2 Yes stabilize road had tracks					
V. Any VISIBLE Settlement, misalignment or cracks? None observed						
DHEC 2604 (Rev 11/2011)						
#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Vegetation, including weeds, small trees, and grass, must be cut. Small trees must be cut

Immediately before they grow larger and their root systems create seepage pathways.	
II. Animal activity observed? None observed	
III. Any obvious alterations or repairs made? None observed	
iv. Erosion observed on upstream slope? Some small bare areas observed	
v. Settlement or cracks visible in slope? None observed but could not complet	ely inspect because of vegetation
C. Down Stream Slope	
i. Vegetation (grass, trees weeds)? Vegetation, including weeds, small trees, and	nd grass, must be cut. Small trees must be cut
immediately before they grow larger and their root systems create seepage pathways.	
ii. Animal activity observed? None observed	
·	
iii. Any obvious alterations or repairs made? None observed	
iv Frosion observed on down stream slope? Could not inspect because of	f thick vegetation
v Settlement or cracks visible in slope? Could not inspect because of thick ve	actation
	getation
vi Too droing flowing? None found	
wii Any approach a bear and off an algorithm leastion of any and all	
VII. Any seepage observed? If so, describe location, Yes, 20x10' area 10	00' to the right of the primary outlet pipe (not flowing but
TIOW rate, and any turbidity or color within the flow: water-loving vegeta	tion was observed)
D. Primary Spillway	
i. Any visible deterioration of structure? No. deterioration observed of the stru	cture in place on the downstream side of the dam:
	delta in the needed of
Towever, the pipe system appears to have been allered without appropriate permits. No structure v	
II. Is there an obvious need to repair or replace trash rack? Not app	licable
iii. Any noticeable problems with debris? No structure visible in the reservoir	r.
· · · · · · · · · · · · · · · · · · ·	
· · · · · · · · · · · · · · · · · · ·	
IV. IS VAIVE OF GATE present? Yes, valve present on downstream side of the dam.	
E. Outlet Pipe	
i. Any water visibly flowing or leaking outside of the discharge pipe?	None observed
<li>ii. Describe any deflection or damage observed to the pipe:</li>	Could not inspect because pipe submerged
iii Visible condition of outlet channel:	
Good, water from downstream unregulat	ed dam backed up in outlet channel
F. Auxiliary (Emergency) Spillway	
i. Noticeable obstructions to flow? Yes Small trees and thick vegetation observer	d for concrete structure spillway. Large pipe, fence and
fence posts, and barn structure for earthen spillway. These obstructions must be removed immedia	tely.
II. Animal activity observed? None observed for concrete structure or earthen spi	llways.
iii Any noticeable deterioration in the approach or discharge chappe	Concrete attractives Could act insert here a
m. Any nonocable deterioration in the approach of discridinge challing	Concrete structure: Could not inspect because of
thick vegetation. Earthen spillway: Yes, some rills observed down to catch pond and erosion in road	d bed that crosses the spillway.
iv. Any visible deterioration of structure's crest? Concrete structure: Could	not inspect because of thick vegetation. Earthen
spillway: Yes, erosion in road bed that crosses the spillway	

F Auxiliary	(Emergency)	Snillway	continued
F. Auxilial y	(Emergency)	Spillway	continueu

v. If applicable, any observed exposure of rebar reinforcement? Not applicable

vi. If applicable, any visible leakage below concrete spillway? Not applicable

#### H. Downstream/Hazard Class Issues

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

#### 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?

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. Unpermitted alteration of the primary outlet pipe: A detailed analysis of the hydraulic adequacy and structural stability of

the dam must be done by a qualified, licensed SC professional engineer to evaluate the impacts of this alteration.

2. Large gully/ area of erosion near the left groin: Structural stability of dam needs to be observed and evaluated by a

qualified, licensed SC professional engineer.

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## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

## Section III (Dam Inspection Checklist):

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## Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary I Regulated I	nspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Inform	nation)	
A. Dam Number: <b>D</b> <u>2875</u> & H	azard Class <sup>2</sup>	B. Name of Dam: Parkins Lake (formerly E.P. Collins)
C. Inspection Date ( <u>09/06</u> /20 <u>1</u>	3) & Time: 11:30 a.m.	D. Date of Last Inspection: (04/29/2010_)
E. Location-County/City: Greenville	/ Greenville	F. EQC Regional Office: UpstateGreenville
G. Inspector's Name: Melissa Dawkir	IS	
H. Owner's Name: J.M.S. Inc		
I. Contact Person (if different fro	m above): Tom Latham	
J. Dam Owner's or Contact Pers	on's Phone Numbers:	Home ( <u>864_) 288 6885_</u>
		Office ()
K. Dam Owner's or Contact Pers Address 1 <u>122 Parkins Lake Road</u> Address 2 (optional)	son's mailing address:	
Section II (Dam Condition	<u>)</u>	
General Condition Assessmer	it (Select one of the f	ollowing):
a) Satisfactory b) F	air c) Poor _(	d) Unsatisfactorye) Not Rated
Section III (Dam Inspection	on Checklist)	
<b>A. Dam Crest</b> i. Vegetation (grass, trees wee	cds)? Grass in good conditio	n
ii. Animal activity observed?	None observed	
iii. Any obvious alteration or re	Dairs made? None obse	rved
iv. Erosion noticed on crest?	None observed	
v. Any visible settlement, misa	ignment or cracks? No	one observed
DHEC 2604 (Rev 11/2011)		

B. Upstream Slope i. Vegetation (grass, trees weeds)? Grass in good condition

ii. Animal activity observed? Holes along the erosion protection were observed (se	e item B.iv below); animals may have caused this
erosion. Fill in holes and reseed as necessary to prevent erosion. Monitor the dam regularly for sign	s of burrowing animals.
iii. Any obvious alterations or repairs made? <u>None observed</u>	
iv Frosion observed on unstream slope? Yes holes were observed in an are-	a on the right side of the dam behind the concrete
v Settlement er erecke vieible in elene?	
C. Down Stream Slope	
i. Vegetation (grass, trees weeds)? Grass in good condition	
ii. Animal activity observed? None observed	
iii. Any obvious alterations or repairs made? None observed	
iv. Erosion observed on down stream slope? Some sloughing was observed in	the area of seepage (see item C.vii below). Also, it app
that the dam may have been mowed while it was wet and there are tire tracks from the equipmentmonitor	these tracks and reseed as necessary to prevent eros
v. Settlement or cracks visible in slope? Some sloughing was observed in the a	rea of seepage (see item C.vii below)
vi. Toe drains flowing? Yes, significant flows through toe drain. Monitor the toe drain to	o ensure that it does not become clogged with iron
bacteria. The toe drain system should be monitored regularly to ensure that it does not become cloc	iged.
vii. Any seepage observed? If so, describe location. Yes, a large area (15' ta	I x 75' wide) in the center of the dam, 25' downslope was
flow rate, and any turbidity or color within the flow: wet and spongy with str	anding water observed. Tom Latham indicated that this a
appeared to be larger than in the past. See Section IV. item 1.	•
D Primary Spillway	
An Annaly Opinway	
I. Any VISIDIE deterioration of Structure? Concrete spillway is considered to be the	primary spillway since the main spillway through the
was closed off in 1997, according to the file. No visible deterioration of the concrete spillway was observed; howe	ver, vegetation and debris obscured a portion of the spills
ii. Is there an obvious need to repair or replace trash rack?	rack
iii Any noticeable problems with debris?	
	liway must be cut and removed. See Section IV, iter
iv Is valve or gate present?	
E. Outlet Pine	
i Any water visibly flowing or leaking outside of the discharge nine?	
	A small amount of flow was observed from the p
blocking the old outlet pipe. Continue to monitor this area to ensure that flows do not increase.	
ii. Describe any deflection or damage observed to the pipe:	N/A
iii. Visible condition of outlet channel:	
E Auxiliary (Emorgonov) Spillway	
i Noticeable obstructions to flow?	
No emergency spillway. See item D.i above.	
ii. Animal activity observed? <sub>N/A</sub>	
iii Any noticeable deterioration in the approach or discharge channel	2 1/4
in any noncease deterioration in the approach of discharge charmer	: <u>N/A</u>
iv. Any visible deterioration of structure's crest?	
:C 2604 (Rev 11/2011)	

<b>F. Auxiliary (Emergency) Spillway continued</b> v. If applicable, any observed exposure of rebar	reinforcement?	<u>N/A</u>
vi. If applicable, any visible leakage below concre	ete spillway?	N/A
H. Downstream/Hazard Class Issues i. Any noticeable changes immediately downstre	am of the dam	that affects the hazard classification?
Yes, houses below the dam on Poplar Grove Court, Beer	chridge Way, Spr	inghouse Way, and Parkins Mill Road.
I. Emergency Action Plan (EAP) i. Emergency Action Plan provided by owner?	No	
ii. Does EAP contains emergency alert notification	on plan? If so,	when was it last updated?
iii. Does EAP contain specific actions to take if the	ne dam has fai	led or is near failure?

## Section IV (Conclusions)

#### General comments and recommendations:

1. The area of seepage should be evaluated by a South Carolina licensed, professional engineer. The area should be monitored

on a regular basis to ensure that it does not become larger and that flowing, muddy water is not present. The toe drain system

should be monitored on a regular basis to ensure that it is not or does not become clogged.

2. The spillway must be maintained with no obstructions to flow. The footbridge across the primary spillway could potentially trap

debris and may need to be removed.

3. The hydraulic capacity of the dam should be evaluated. We have no documentation in our files of an updated hydraulic

analysis showing that the primary spillway and outlet pipe have been decommissioned. Provide an updated hydrologic

and hydraulic analysis of the dam on or before March 13, 2014. Contact John Poole (803-898-4212) to determine the spillway

design flood that should be used for the analysis.

Note: Siphon system in place to lower the water level. It was not in use at the time of the inspection and was capped. Tom

Latham indicated that it had been tested in the past 2 years.

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## INSTRUCTIONS

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## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

## Section III (Dam Inspection Checklist):

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## Section IV(Conclusions):

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

D H E C	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Info	rmation)	
A. Dam Number: <b>D</b> <u>2876</u> 8	A Hazard Class <sup>2</sup>	B. Name of Dam: Lake Conestee
C. Inspection Date ( <u>12/18</u> /2	0 <u>1</u> 4) & Time: <u>10:20 a.m.</u>	D. Date of Last Inspection: ( <u>11/17/2011</u> )
E. Location-County/City: Green	ville / Greenville	F. EQC Regional Office: Upstate EQC Greenville
G. Inspector's Name: Melissa Da	wkins, Petar Milenkov, John Poole	
H. Owner's Name: Conestee Four	idation Inc.	
I. Contact Person (if different	from above): Dave Hargett, Pl	hD
J. Dam Owner's or Contact P	erson's Phone Numbers:	Home ()
		Office ( <u>864</u> ) <u>277</u> - <u>2004</u>
K. Dam Owner's or Contact F	erson's mailing address:	Other ( <u>864</u> ) <u>787</u> - <u>8160</u>
Address 1 P.O. Box 9111		
Address 2 (optional)		
Section II (Dam Condit	ion)	
General Condition Assessment         a) Satisfactory         b         Section III (Dam Inspect         A. Dam Crest         i. Vegetation (grass, trees of the provided of t	nent (Select one of the f ) Fair c) Poor [ tion Checklist) veeds)? Vegetation was observed	following):  d) Unsatisfactory e) Not Rated ved growing out of portions of the masonry. This vegetation should be
ii. Animal activity observed	None observed	
iii. Any obvious alteration or	repairs made? None obs	erved
iv. Erosion noticed on crest be monitored to ensure that the situation v. Any visible settlement, m	? No erosion was observed; h does not worsen. salignment or cracks?	nowever, deterioration of the mortar in some spots was observed. This should Cracks in the mortar were observed.
v. Any visible settlement, m 	salignment or cracks?	cracks in the mortar were observed.

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Vegetation was observed growing out of portions of the masonry. This vegetation should be removed.

ii. Animal activity observed? No	lone observed
----------------------------------	---------------

iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of safety concerns

iv. Erosion observed on upstream slope? None observed but could not fully inspect because of safety concerns

v. Settlement or cracks visible in slope? None observed but could not fully inspect because of safety concerns

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? On the right side, a small amount of vegetation was observed. On the left side, more vegetation was observed. The vegetation must be cut or treated and removed.

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? Yes, the permitted repairs to the sluice gate were observed. A few small cracks were observed in the concrete surface. Monitor these to ensure that they do not worsen.

iv. Erosion observed on down stream slope? No erosion was observed; however, deterioration of the masonry face was observed on the left side along the toe. Portions of the face were missing near the areas of seepage

v. Settlement or cracks visible in slope? Cracks in the mortar were observed throughout the face.

vi. Toe drains flowing? The drain on the right side of the previously filled sluice gate on the left was dripping. Monitor to ensure that the flow does not increase.

vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: contain high levels of heavy metals. See Section IV, items 1 and 2.

Yes, flowing seeps were observed at multiple locations on the right and left sides. According to Dr. Hargett, the ochre has been tested and found to

#### **D. Primary Spillway**

i. Any visible deterioration of structure? According to Dr. Hargett, there are 8 different primary spillway elevations. The penstock also

acts as a spillway. Some of the spillways could be observed; deterioration of the mortar was observed.

ii. Is there an obvious need to repair or replace trash rack?

Not applicable

iii. Any noticeable problems with debris? Yes, some debris was observed in some of the spillways and must be removed. According

to Dr. Hargett, debris is removed on a regular basis and access to remove it is an issue.

iv. Is valve or gate present? No

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? The penstock was reviewed as the outlet pipe.

Significant flows were observed through the penstock. According to Dr. Hargett, the structure around the penstock was designed to leak. See Section IV, item 3.

ii. Describe any deflection or damage observed to the pipe:

iii. Visible condition of outlet channel: Some debris was observed in the channel below the penstock. This should be removed. The main

channel was in good condition with little erosion observed.

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? All of the masonry spillways were reviewed under item III.C.iii above. It is unknown which are considered

to be primary and which are auxiliary.

ii. Animal activity observed? None observed for any spillways.

iii. Any noticeable deterioration in the approach or discharge channel? Not applicable

iv. Any visible deterioration of structure's crest? See item III.C.i above.

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Could not inspect because of flowing water

F. Auxiliary (Emergency) Spillway continued	
v. If applicable, any observed exposure of rebar reinforcement? Not applicable	
vi. If applicable, any visible leakage below concrete spillway? Not applicable	
H. Downstream/Hazard Class Issues	
i. Any noticeable changes immediately downstream of the dam that affects the hazard classification?	No
I. Emergency Action Plan (EAP)	
i. Emergency Action Plan provided by owner? An updated EAP must be submitted on or before 4/29/15.	
5 ;         ; <u></u>	
ii. Does EAP contains emergency alert notification plan? If so, when was it last updated?	
iii Does FAP contain specific actions to take if the dam has failed or is near failure?	
Section IV (Conclusions)	
General comments and recommendations:	
1. Submit the laboratory results for these seeps to the Department. Additional requirements may be given upon review of these re	sults.
2. A qualified, licensed S.C. professional engineer must evaluate this seepage to determine whether it is affecting the s	afety
of the dam and whether measurements should be taken to determine baseline flows.	
3. A qualified, licensed S.C. professional engineer must evaluate these flows to determine whether measurements show	blı
be taken to determine baseline flows.	

#### Preliminary Dam Inspection Disclaimer:

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## INSTRUCTIONS

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## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

## Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Info	ormation)	
A. Dam Number: <b>D</b> <u>2879</u>	& Hazard Class <sup>2</sup>	B. Name of Dam: Huff Creek WCD 2A
C. Inspection Date ( <u>12/15</u> /2	0 <u>1</u> 4) & Time: <u>9:50 a.m.</u>	D. Date of Last Inspection: ( <u>11/30/2011</u> )
E. Location-County/City: Green	nville / Pelzer	F. EQC Regional Office: Upstate EQC Greenville
G. Inspector's Name: Melissa D.	awkins	
H. Owner's Name: Teresa Burdin	e et al and Ted Bell (land owners)/ G	reenville County Soil & Water Conservation District (operator)
I. Contact Person (if different	from above): Kirsten Roberts	on (GCSWCD)
J. Dam Owner's or Contact F	erson's Phone Numbers	: Home ()
		Office ()
K. Dam Owner's or Contact F	Person's mailing address	Other ( <u>864</u> ) <u>907</u> - <u>5534</u>
Address 1 460 Woodville Road	d, Pelzer SC 29669 (Burdine et al)/	709 E. McBee Avenue, Greenville, SC 29601 (Bell)
Address 2 (optional) 301 U	niversity Ridge, Suite 4800, Greenv	ille, SC 29601 (GCSWCD)
City	, s	State Zip Code
Section II (Dam Condit General Condition Assess a) Satisfactory	ion) ment (Select one of the b) Fair 🖌 c) Poor ction Checklist)	following): d) Unsatisfactorye) Not Rated
<b>A. Dam Crest</b> i. Vegetation (grass, trees	weeds)? Grass and weeds in g	good condition were observed.
ii. Animal activity observed	? None observed	
iii. Any obvious alteration of	r repairs made? None obs	served
iv. Erosion noticed on cres	t? None observed	
v. Any visible settlement, m	isalignment or cracks?	None observed
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#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Grass, weeds, and woody vegetation (recently cut) were observed. Some bare areas were observed on the

right side; monitor and re-seed as necessary. Woody vegetation was observed along the fence; it must be cut and removed.

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? None observed

iv. Erosion observed on upstream slope? Some equipment ruts were observed throughout the slope. Monitor these areas to ensure that grass is re-established and erosion does not occur. Filling may be necessary

v. Settlement or cracks visible in slope? None observed

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Grass, weeds, and woody vegetation (recently cut) were observed. Some bare areas were observed on the right side; monitor and re-seed as necessary. See Section IV, item 1.

ii. Animal activity observed? Yes, an animal trail was observed on the right side of the outlet pipe. Erosion was observed in this area. The erosion must be repaired with additional riprap or other measures. Monitor the dam regularly to ensure that harmful animal species are not present.

iii. Any obvious alterations or repairs made? None observed

iv. Erosion observed on down stream slope? Yes, erosion was observed on the right side of the outlet pipe and must be repaired. Some equipment ruts were observed throughout the slope. Monitor these areas to ensure that grass is re-established and erosion does not occur. Filling may be necessary. v. Settlement or cracks visible in slope? A hole was observed at the toe of the dam, approximately 30' to the right of the outlet pipe.

If it appears to be an old tree stump, then fill and compact the area. If it appears to be deeper, then additional investigation would be necessary.

vi. Toe drains flowing? Yes, both toe drains were flowing and need to be cleaned out.

vii. Any seepage observed? If so, describe location, None observed flow rate, and any turbidity or color within the flow:

#### **D. Primary Spillway**

i. Any visible deterioration of structure? None observed

ii. Is there an obvious need to repair or replace trash rack?

iii. Any noticeable problems with debris? None observed

iv. Is valve or gate present? Yes, according to the operator, the valves are operated every other year.

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? None observed but could not fully inspect because of flowing water

ii. Describe any deflection or damage observed to the pipe:

iii. Visible condition of outlet channel: Some erosion was observed on the right side. A fence was observed across the outlet channel,

approximately 60' from the outlet. This may be causing water to back up and erode the banks on the right side.

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? None observed

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? Some bare areas were observed in the road.

Monitor and re-seed as necessary to prevent erosion.

iv. Any visible deterioration of structure's crest? None observed

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None observed

Could not fully inspect due to flowing water.

F.	Auxiliary	(Emergency)	Spillway	continued
•••	Auxiliui y	(Line geney)	opinituy	oonnaca

v. If applicable, any observed exposure of rebar reinforcement? Not app

vi. If applicable, any visible leakage below concrete spillway? Not

#### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes, residences at 1751 and 1779 Reedy Fork Road, Pelzer.

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

i. Emergency Action Plan provided by owner?

No, EAP must be submitted on or before 4/2/15.

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 thick vegetation, including weeds, small trees, shrubs, brush, and other deleterious vegetation, must be cut and removed from

the area extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater. Once the thick

vegetation has been removed, an appropriate ground cover must be established. Grass is the ideal ground cover for a dam.

## **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.

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Not applicable

Not applicable

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

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c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

## Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DMOTE PROTECT PROSPER	Preliminary I Regulated [	nspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Info	ormation)	
A. Dam Number: <b>D</b> <u>2880</u>	& Hazard Class <sup>2</sup>	B. Name of Dam: Huff Creek WCD 3A
C. Inspection Date ( <u>12/15</u> /2	0 <u>1</u> 4) & Time: <u>11:00 a.m.</u>	D. Date of Last Inspection: ( <u>11/30/2011</u> )
E. Location-County/City: Green	nville / Pelzer	F. EQC Regional Office: Upstate EQC Greenville
G. Inspector's Name: Melissa D	awkins	
H. Owner's Name: Clarence Ham	ick III & John Hamrick (land owners)/ G	reenville County Soil & Water Conservation District (operator)
I. Contact Person (if different	from above): Kirsten Robertson	(GCSWCD)
J. Dam Owner's or Contact F	Person's Phone Numbers:	Home ()
		Office ()
		Other ( <u>864</u> ) <u>907</u> - <u>5534</u>
K. Dam Owner's or Contact F	Person's mailing address:	
Address 1 <u>170 McKittrick Road</u>	d, Pelzer, SC 29669 (Hamrick)	
Address 2 (optional) 301 U	niversity Ridge, Suite 4800, Greenville	a, SC 29601 (GCSWCD)
Section II (Dam Condit General Condition Assess a) Satisfactory	ion) nent (Select one of the fo b) Fair 🖌 c) Poor [ ction Checklist)	ollowing): d) Unsatisfactorye) Not Rated
A. Dam Crest i. Vegetation (grass, trees reseed as necessary. Gravel may be ner ii. Animal activity observed	weeds)? Grass and a dirt road w eded in the tire tracks to prevent erosi ? None observed	ere observed. Bare spots were observed in the tire tracks. Monitor and on.
iii. Any obvious alteration o	r repairs made? None obser	ved
iv. Erosion noticed on cres	t? None observed	
v. Any visible settlement, m	isalignment or cracks? A	ut was observed in the tire tracks in the middle of the dam, in line with the

#### B. Upstream Slope

i. Vegetation (grass, trees weeds)? Grass, weeds, and woody vegetation (recently cut) were observed.

iii Any obvious alteratio	
	ons or repairs made? None observed
iv. Erosion observed on	Upstream slope? Riprap is in place along the water's edge. Some equipment ruts were observed. Mon
these areas to ensure that grass is	re-established and erosion does not occur. Filling may be necessary.
v. Settlement or cracks	visible in slope? None observed
i Vegetation (grass tre	and woody vegetation (recently cut) were observed. Corp was observed at the t
the slope on the left side: this need:	ts to be cut so that portion can be inspected regularly. See Section IV. item 1.
ii. Animal activity obser	rved? A possible deer trail was observed. Monitor and reseed as necessary.
iii. Any obvious alteration	ons or repairs made? None observed
. Francisco altra en contra de contr	
IV. Erosion observed on	1 down stream slope? Equipment ruts were observed throughout the downstream slope. Monitor these a
v Settlement or cracks	visible in slope? None observed
vi. Toe drains flowing?	Yes, both toe drains were flowing and need to be cleaned out.
vii. Any seepage observ	ved? If so, describe location, Yes, the bottom 1/3 of the dam was wet from 10' to the left of the outlet pipe
flow rate, and any turbic	dity or color within the flow: to the right of the outlet pipe. Some water-loving vegetation was also obse
Standing water was observed on the r	right side, approximately 15-20' from the toe, from 100' to the right of the outlet pipe to the outlet channel. See Section IV, ite
D. Primary Spillway	
i Any visible deterioration	ion of structure?
	None observed
ii. Is there an obvious ne	eed to repair or replace trash rack? None observed
iii. Any noticeable proble	lems with debris? None observed
iv le valve er gate pros	cont2
	CILL: Ves according to the operator, the values are operated every other year
IV. IS VAIVE OF GALE PIES	Yes, according to the operator, the valves are operated every other year.
E. Outlet Pipe	Yes, according to the operator, the valves are operated every other year.
E. Outlet Pipe i. Any water visibly flowi	ing or leaking outside of the discharge pipe? None observed but could not fully inspect bec
E. Outlet Pipe     i. Any water visibly flowing water	ring or leaking outside of the discharge pipe? None observed but could not fully inspect bec
E. Outlet Pipe i. Any water visibly flowi of flowing water ii. Describe any deflection	ring or leaking outside of the discharge pipe? None observed but could not fully inspect become on or damage observed to the pipe: Could not fully inspect due to flowing water. Vege
E. Outlet Pipe     i. Any water visibly flowi     of flowing water     ii. Describe any deflection	ring or leaking outside of the discharge pipe? None observed but could not fully inspect bec
E. Outlet Pipe     i. Any water visibly flowi     of flowing water     ii. Describe any deflection     was observed in the outlet pipe and m     iii. Visible condition of o	Yes, according to the operator, the valves are operated every other year.  In gor leaking outside of the discharge pipe? None observed but could not fully inspect become of the pipe:  Could not fully inspect due to flowing water. Vege  must be removed. Also, deterioration of the concrete support on the right was observed. Monitor to ensure it does not wo putlet channel:
E. Outlet Pipe i. Any water visibly flowi of flowing water ii. Describe any deflection was observed in the outlet pipe and n iii. Visible condition of o	Yes, according to the operator, the valves are operated every other year.         ring or leaking outside of the discharge pipe?         None observed but could not fully inspect become         ion or damage observed to the pipe:         Could not fully inspect due to flowing water. Vege         must be removed. Also, deterioration of the concrete support on the right was observed. Monitor to ensure it does not wo         outlet channel:       Good, little to no erosion was observed
E. Outlet Pipe i. Any water visibly flowi of flowing water ii. Describe any deflection was observed in the outlet pipe and m iii. Visible condition of o	Yes, according to the operator, the valves are operated every other year.         ring or leaking outside of the discharge pipe?         None observed but could not fully inspect bec         ion or damage observed to the pipe:         must be removed. Also, deterioration of the concrete support on the right was observed. Monitor to ensure it does not wo         outlet channel:         Good, little to no erosion was observed
E. Outlet Pipe i. Any water visibly flowi of flowing water ii. Describe any deflection was observed in the outlet pipe and n iii. Visible condition of of F. Auxiliary (Emergency i. Noticeable obstruction	Yes, according to the operator, the valves are operated every other year.  In gor leaking outside of the discharge pipe? None observed but could not fully inspect bec  None observed but could not fully inspect bec  Could not fully inspect due to flowing water. Vege  must be removed. Also, deterioration of the concrete support on the right was observed. Monitor to ensure it does not wo outlet channel: Good, little to no erosion was observed  Y) Spillway  Is to flow? None observed
E. Outlet Pipe     i. Any water visibly flowi     of flowing water     ii. Describe any deflection     was observed in the outlet pipe and m     iii. Visible condition of o  F. Auxiliary (Emergency     i. Noticeable obstruction	Yes, according to the operator, the valves are operated every other year.         ring or leaking outside of the discharge pipe?         None observed but could not fully inspect bec         ion or damage observed to the pipe:         must be removed. Also, deterioration of the concrete support on the right was observed. Monitor to ensure it does not wo         buttlet channel:       Good, little to no erosion was observed         y) Spillway         ns to flow?       None observed
E. Outlet Pipe i. Any water visibly flowi of flowing water ii. Describe any deflection was observed in the outlet pipe and n iii. Visible condition of of F. Auxiliary (Emergency i. Noticeable obstruction ii. Animal activity observ	Yes, according to the operator, the valves are operated every other year.         ring or leaking outside of the discharge pipe?       None observed but could not fully inspect bec         ion or damage observed to the pipe:       Could not fully inspect due to flowing water. Vege         must be removed. Also, deterioration of the concrete support on the right was observed. Monitor to ensure it does not we outlet channel:       Good, little to no erosion was observed         y) Spillway       None observed         vis to flow?       None observed
E. Outlet Pipe  i. Any water visibly flowi  of flowing water  ii. Describe any deflection  was observed in the outlet pipe and n  iii. Visible condition of o  F. Auxiliary (Emergency  i. Noticeable obstruction  ii. Animal activity observe	ring or leaking outside of the discharge pipe? <u>None observed but could not fully inspect bec</u> ion or damage observed to the pipe: <u>Could not fully inspect due to flowing water. Vege</u> must be removed. Also, deterioration of the concrete support on the right was observed. Monitor to ensure it does not we putlet channel: <u>Good, little to no erosion was observed</u> <b>y) Spillway</b> ns to flow? <u>None observed</u> ioration in the approach or discharge channel? Bare spots were observed in the tire tracks of
E. Outlet Pipe     i. Any water visibly flowi     of flowing water     ii. Describe any deflection     was observed in the outlet pipe and n     iii. Visible condition of o  F. Auxiliary (Emergency     i. Noticeable obstruction     ii. Animal activity observ     iii. Any noticeable determ     road. Monitor and reseed as necess	Yes, according to the operator, the valves are operated every other year.         ring or leaking outside of the discharge pipe?       None observed but could not fully inspect bec         ion or damage observed to the pipe:       Could not fully inspect due to flowing water. Vege         must be removed. Also, deterioration of the concrete support on the right was observed. Monitor to ensure it does not we butlet channel:       Good, little to no erosion was observed         y) Spillway       None observed         is to flow?       None observed         /ed?       None observed         ioration in the approach or discharge channel?       Bare spots were observed in the tire tracks of sary or add gravel to prevent erosion.
	Yes, according to the operator, the valves are operated every other year.         ring or leaking outside of the discharge pipe?       None observed but could not fully inspect becc         ion or damage observed to the pipe:       Could not fully inspect due to flowing water. Vege         must be removed. Also, deterioration of the concrete support on the right was observed. Monitor to ensure it does not we observed         y) Spillway         ns to flow?         None observed         ioration in the approach or discharge channel?         Bare spots were observed in the tire tracks of sary or add gravel to prevent erosion.         tion of structure's crest?

F. Auxiliary (Emergency) Spillway continued	
v. If applicable, any observed exposure of rebar reinforcement?	Not applicable
vi. If applicable, any visible leakage below concrete spillway?	Not applicable
H Downstroom/Hazard Class Issues	
i Any noticeable changes immediately downstream of the dam	that affects the hazard classification? No
I. Emergency Action Plan (EAP)	
i. Emergency Action Plan provided by owner? No, EAP must	be submitted on or before 4/4/15.
ii Dess FAD contains amorganau clart notification plan? If so	when we it last up dated?
II. Does EAP contains emergency alert notification plan? If so, t	when was it last updated?
iii. Does EAP contain specific actions to take if the dam has fail	ed or is near failure?
Caption IV (Conclusions)	
Section IV (Conclusions)	
General comments and recommendations:	
1. The thick vegetation, including weeds, small trees, shrubs, brush, and other of	deleterious vegetation, must be cut and removed from
the area extending one-half the height of the dam beyond the toe or 25' be	yond the toe, whichever is greater. Once the thick

vegetation has been removed, an appropriate ground cover must be established. Grass is the ideal ground cover for a dam.

2. Deeper ruts were observed just above and approximately 100' to the right of the outlet pipe. These must be filled and compacted

to prevent erosion. Reseed and monitor to ensure that grass is re-established.

3. Erosion was also observed on both side of the outlet pipe, down into the stilling basin, between the riprap. Monitor this area

to ensure it does not worsen. Additional riprap or other erosion prevention measures may be necessary.

4. These areas should be monitored regularly to ensure that water does not begin flowing or become turbid. This would indicate a

very serious situation and the Department should be notified immediately.

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## INSTRUCTIONS

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

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A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

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## Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary In Regulated Da	spection Report for South Carolina ams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Info	rmation)	
A. Dam Number: <b>D</b> <u>2882</u> &	Hazard Class <sup>2</sup>	B. Name of Dam: <u>Shelby Joines Pond</u>
C. Inspection Date ( <u>03/01</u> /20	13) & Time: 1:00 p.m.	D. Date of Last Inspection: (01/12/2010_)
E. Location-County/City: Green	ille / Landrum	F. EQC Regional Office:
G. Inspector's Name: Melissa Da	vkins	
H. Owner's Name: Morgan Grahar	1	
I. Contact Person (if different	rom above):	
J. Dam Owner's or Contact Pe	erson's Phone Numbers:	Home ()
		Office ()
K. Dam Owner's or Contact P Address 1 <u>P.O. Box 1804</u>	erson's mailing address:	Other ()
Address 2 (optional)		
City Greer	, Stat	te <u>SC</u> Zip Code <u>29652</u>
Section II (Dam Conditi General Condition Assessm a) Satisfactory b Section III (Dam Inspec	on) ent (Select one of the fol ) Fair 🖌 c) Poor 🗌 tion Checklist)	lowing): ] d) Unsatisfactorye) Not Rated
<b>A. Dam Crest</b> i. Vegetation (grass, trees w	reeds)? Grass, good condition	
ii. Animal activity observed?	None observed	
iii. Any obvious alteration or	repairs made? None observe	ed
iv. Erosion noticed on crest	A few small bare areas were ob	oserved.
v. Any visible settlement, mi	salignment or cracks? None	e observed
DHEC 2604 (Rev 11/2011)		

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Grass, mostly good condition

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? None observed

iv. Erosion observed on upstream slope? Some sloughing noted in 1/12/10 inspection report still observed--should be repaired.

v. Settlement or cracks visible in slope? None observed

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? The road that is on the downstream slope needs to be stabilized. Elsewhere, grass in good condition.

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? None observed

iv. Erosion observed on down stream slope? Yes, erosion observed on the road and below the road on the left side down to the next impoundment.

v. Settlement or cracks visible in slope? None observed

vi. Toe drains flowing? None seen

vii. Any seepage observed? If so, describe location, Yes, the same seepage area that was noted in the 1/12/10 inspection flow rate, and any turbidity or color within the flow: report was observed (on the rocks); this area is approximately 20'x20'. Two other areas of possible seepage were observed. Both were on the left side of the dam, below the road. Both areas were approximately 10'x20'.

#### **D. Primary Spillway**

- i. Any visible deterioration of structure?
  - No structure was visible in the reservoir

No structure was visible in the reservoir

iii. Any noticeable problems with debris? No structure was visible in the reservoir

iv. Is valve or gate present? No structure was visible in the reservoir

ii. Is there an obvious need to repair or replace trash rack?

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? Outlet pipe could not be located for inspection

ii. Describe any deflection or damage observed to the pipe:

iii. Visible condition of outlet channel: Outlet pipe could not be located for inspection

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? Trees were observed around the pipe on the right side of the reservoir, near the right groin. This pipe was also partially full of leaves. The trees and leaves should be removed.

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? Discharge channel could not be located for inspection

iv. Any visible deterioration of structure's crest? Not applicable

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Outlet pipe could not be located for inspection

F. Auxiliary (Emergency) Spillway continued v. If applicable, any observed exposure of rebar reinforcement? <u>Not applicable</u>
vi. If applicable, any visible leakage below concrete spillway? Not applicable
H. Downstream/Hazard Class Issues i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes, a covered bridge, mill, and new houses are located approximately 1/4 mile downstream
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?
iii. Does EAP contain specific actions to take if the dam has failed or is near failure?

## 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.

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

## Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Info	rmation)	
A. Dam Number: <b>D</b> <u>2889</u> 8	Hazard Class <sup>2</sup>	B. Name of Dam: Huff Creek WCD 1B
C. Inspection Date ( <u>12/15</u> /20	<u>1</u> 4) & Time: <u>13:00</u>	D. Date of Last Inspection: ( <u>11/30/2011</u> )
E. Location-County/City: Green	rille / Pelzer	F. EQC Regional Office: Upstate EQC Greenville
G. Inspector's Name: Melissa Da	wkins	
H. Owner's Name: Tracey Coleman	& Donald Hawthorne (land owners)/	Greenville County Soil & Water Conservation District (operator)
I. Contact Person (if different	from above): Kirsten Robertso	on (GCSWCD)
J. Dam Owner's or Contact Pe	erson's Phone Numbers	Home ()
		Office ()
K Dom Ouror's or Contact D	oroon'o moiling oddrooo	Other ( <u>864</u> ) <u>907</u> - <u>5534</u>
Address 4 24% W Gorraia Po	erson's mailing address.	/ Houthorpo)
	iversity Bidge, Suite 4800, Creepy	
Address 2 (optional) 301 01	rversity Ridge, Suite 4000, Greenv	
Ony	,	
Section II (Dam Condition General Condition Assessm a) Satisfactory b Section III (Dam Inspec	on) eent (Select one of the ) Fair 🖌 c) Poor tion Checklist)	following): d) Unsatisfactorye) Not Rated
<b>A. Dam Crest</b> i. Vegetation (grass, trees v	/eeds)? Weeds and grass in g	good condition were observed
ii. Animal activity observed?	None observed	
iii. Any obvious alteration or	repairs made? None obs	erved
iv. Erosion noticed on crest	? None observed	
v. Any visible settlement, mi near the outlet pipe (not directly over the pi DHEC 2604 (Rev 11/2011)	salignment or cracks? <u>F</u> be). Monitor these areas to ensure th	Ruts were observed approximately 200' from the left groin and near the power pole at grass is re-established and erosion does not occur. Filling may be necessary.

Section III (Dam Inspection Check	klist) continued
B. Upstream Slope	
i. Vegetation (grass, trees weeds)? Gras	s, weeds, and woody vegetation that had been recently cut was observed. Based on the design
drawings, the trees along the shoreline between the beach of	dock, power poles and emergency spillway appear to be off the footprint of the dam.
ii. Animal activity observed? None observed	ad
iii. Any obvious alterations or repairs ma	de? None observed
iv. Erosion observed on upstream slope?	None observed
v. Settlement or cracks visible in slope?	None observed
C. Down Stream Slope	
i. Vegetation (grass, trees weeds)? Grass	s, weeds, and woody vegetation that had been recently cut was observed on the majority of the
slope. Some of the woody vegetation that was observed below	ow the farm road, near the outlet pipe appears to be on the dam. See Section IV, item 1.
ii. Animal activity observed? Yes, a possible	le animal trail was observed to the right of the outlet pipe. Monitor the dam regularly to ensure
that harmful animal species are not present. Remove using	legal means, as necessary.
iii. Any obvious alterations or repairs ma	de? None observed
iv. Erosion observed on down stream slo	pe? Ruts were observed on the far left side where the kudzu was removed. Monitor these
areas to ensure that grass is re-established and erosion does	s not occur. Filling may be necessary to prevent erosion in these areas. See Section IV, item 2
v. Settlement or cracks visible in slope?	An area of sloughing was observed on the right side of the outlet pipe. It appears that filling/
leveling these areas is need to prevent further erosion.	
vi. Toe drains flowing? Yes, the left toe drain w	as trickling. No flow was coming out of the right toe drain. The right toe drain should be inspected
to ensure that it is not clogged. See item vii below; the areas	s of flowing water may be related to the right toe drain not flowing.
vii. Any seepage observed? If so, describ	De location, Yes, approximately 15' downstream and to the right of the outlet pipe
flow rate, and any turbidity or color within	two areas of flowing water, possible seepage under the dam, were
observed. The seepage must be evaluated by a qualified SC	Clicensed professional engineer. See Section IV, item 3.
<b>D. Primary Spillway</b> i. Any visible deterioration of structure?	None observed but could not get close to observe it
ii. Is there an obvious need to repair or re	eplace trash rack? None observed but could not get close to observe it
iii. Any noticeable problems with debris?	A small amount of debris was observed and should be removed as part of regular maintenance.

E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe?	None observed but could not fully inspect because
of flowing water	

None observed but could not fully inspect because

ii. Describe any deflection or damage observed to the pipe:

of flowing water

iii. Visible condition of outlet channel: Some erosion was observed on the right side of the channel. Monitor this area to ensure it does

not worsen.

F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? None observed

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? None observed

iv. Any visible deterioration of structure's crest? None observed

v. If applicable, any observed exposure of rebar reinforcement? <u>Not applicable</u> vi. If applicable, any visible leakage below concrete spillway? <u>Not applicable</u> H. Downstream/Hazard Class Issues i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? <u>No</u> I. Emergency Action Plan (EAP) i. Emergency Action Plan provided by owner? <u>No, EAP must be submitted on or before 3/14/15.</u> 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 thick woody vegetation must be cut and removed from the entire dam and extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater. Portions of the dam could not be inspected due to the thick vegetation. The vegetation must remain at a manageable level so that you can perform complete inspections of the dam and associated structures on a regular basis to ensure safe operation of the dam. Once the thick vegetation has been removed, an appropriate ground cover must be established. Grass is the ideal ground cover for a dam. 2. Erosion was observed along the road along the toe on the left side. The erosion needs to be repaired. Flows may need to be diverted off the toe to prevent further erosion in this area. 3. A plan must be developed to measure seepage (flow rate and turbidity) in these areas at least monthly. Submit the plan to the Permiting Section in	F. Auxiliary (Emergency) Spillway continued	
<ul> <li>vi. If applicable, any visible leakage below concrete spillway? Not applicable</li> <li>H. Downstream/Hazard Class Issues <ul> <li>i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? No</li> </ul> </li> <li>I. Emergency Action Plan (EAP) <ul> <li>i. Emergency Action Plan provided by owner? No, EAP must be submitted on or before 3/14/15.</li> </ul> </li> <li>ii. Does EAP contains emergency alert notification plan? If so, when was it last updated?</li></ul>	v. If applicable, any observed exposure of rebar reinforcement?	Not applicable
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Columbia for approval (John Poole, SCDHEC Dams and Reservoir Permitting, 2600 Bull Street, Columbia, SC 29201). The seepage measurements

must be recorded at least monthly, correlated to the stage in the reservoir at the time of the measurement, and reported to the Department.

Based on the measurements, a plan to control the seepage may also be required.

## Preliminary Dam Inspection Disclaimer:

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## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

## Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DHEC ROMOTE PROTECT PROSPER	Preliminary I Regulated I	nspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Inform	ation)	
A. Dam Number: <b>D</b> <u>2894</u> & Ha	zard Class2	B. Name of Dam: Huntington Lake
C. Inspection Date ( <u>12/11</u> /20 <u>14</u>	) & Time: <u>9:40 a.m.</u>	D. Date of Last Inspection: ( <u>12/22/2011</u> )
E. Location-County/City: Greenville	/ Greenville	F. EQC Regional Office: Upstate EQC Greenville
G. Inspector's Name: Melissa Dawkins	i	
H. Owner's Name: Lake Huntington Inc		
I. Contact Person (if different from	above): Frank Washick (w	ashickf@bellsouth.net), Larry Reinhart (lwr1964@gmail.com)
J. Dam Owner's or Contact Perso	n's Phone Numbers:	Home ( <u>864-2</u> 75-3453 (Frank)
		Office ()
K. Dam Owner's or Contact Person Address 1 509 Huntington Road	on's mailing address:	Other ()
Address 2 (optional)		
Soction II (Dam Condition	, S	
Section II (Dain Condition	L (Soloot one of the f	ollowing):
a) Satisfactory b) Fa	nir c) Poor [(	d) Unsatisfactory e) Not Rated
A. Dam Crest i. Vegetation (grass, trees wee on the right side. These areas should be reserved	ds)? Grass and weeds in go	ood condition on the majority of the crest. A few bare areas were observed
ii. Animal activity observed?	None observed	
iii. Any obvious alteration or rep	airs made? None obse	rved
iv. Erosion noticed on crest?	None observed	
v. Any visible settlement, misali	gnment or cracks? <u>No</u>	one observed
DHEC 2604 (Rev 11/2011)		

B. Upstream Slope i. Vegetation (grass, trees weeds)? Grass and weeds were observed.

iii /	Any obvious al	toratione or	renaire mar	10'?	None observed				
			repairs mad		None observed				
iv. E	Erosion observ	ed on upstr	eam slope?	Some	e erosion was observed	along the wate	r's edge. Monitor	this area to ensure t	hat it does not wor
If it doe	es, then slope protect	tion along the wa	ater's edge may be	e neede	d.				
v. S	ettlement or ci	racks visible	e in slope?	Yes, ho	les and sloughing we	ere observed	approximately	100' from the righ	t groin. These a
should	be filled in and com	pacted to ensure	that the erosion	does no	t worsen.				
C. Do	own Stream S	lope							
i. V	egetation (gra	ss, trees we	eds)? The d	lownstrea	am slope was difficult	to inspect bec	ause of the stee	ep slopes and falle	n leaves. Large t
were o	bserved along the to	e of the slope. S	See Section IV, ite	em 1.					
ii. A	Animal activity	observed?	None observe	d but dif	ficult to inspect beca	use of steep	slopes and fall	en leaves	
iii. <i>i</i>	Any obvious al	terations or	repairs mad	de?	None observed but	difficult to in	spect because	of steep slopes a	and fallen leaves
iv. E	Erosion observ	ed on dowr	stream slop	pe?	None observed but	difficult to in	spect because	of steep slopes a	and fallen leaves
v. S	ettlement or c	racks visible	e in slope?	Yes, slo	oughing and undulation	ons were obs	erved on both s	ides. Steep slope	es were present,
portion	ns of the dam could n	ot be inspected	because of this.	See Sec	tion IV, item 2.				
vi. T	Toe drains flow	ving? None	seen						
vii	Any seenade o	bserved? I	fso describ	e loca	ation Yes nossi	ble areas of s	eepage were o	bserved around th	e original outlet
flow	rate and any	turbidity or	color within	the fl	OW' Water did n	not annear to h	e flowing but the	re was a large amo	unt of standing w
110 11						iot appear to b	c nowing but the	ie was a large ante	and of standing w
A wet a	area (approximately)	2' x 4') was also	observed approxi	imately 3	30' to the right of the	siphon The	se areas must b	be monitored. See	e Section IV ite
A wet a <b>D. Pr</b> i. Ar outlet s	area (approximately) imary Spillwa ny visible detei structure being remo	2' x 4') was also y rioration of s ved. See Section	observed approxi Structure?	imately ( Primary	30' to the right of the spillway was decomm	siphon. The	se areas must b ne past 10 years	be monitored. Set	e Section IV, ite
A wet a <b>D. Pr</b> i. Ar outlet s ii. Is	imary Spillwa imary Spillwa ny visible deter structure being remo there an obvio	2' x 4') was also y rioration of the ved. See Section ous need to	observed approxi structure? n IV, item 4. n repair or re	Primary	30' to the right of the spillway was decomm trash rack?	siphon. Thes	se areas must h ne past 10 years ble; spillway w	be monitored. See	e Section IV, ite has no record o hed
A wet a D. Pr i. Ar outlet s ii. Is iii. A	area (approximately imary Spillwa ny visible deter structure being remo there an obvio	2' x 4') was also y rioration of s ved. See Section ous need to problems w	observed approxi structure? h IV, item 4. h repair or re vith debris?	Primary	30' to the right of the spillway was decomn trash rack? applicable; spillway v	siphon. Thes nissioned in the Not applica	se areas must t ne past 10 years ble; spillway w issioned	be monitored. See	e Section IV, ite has no record o
A wet a D. Pr i. Ar outlet s ii. Is iii. A	imary Spillwa imary Spillwa ny visible deter structure being remo there an obvio Any noticeable s valve or gate	2' x 4') was also y rioration of s ved. See Section ous need to problems w present?	observed approxi structure? h IV, item 4. o repair or re vith debris?	Primary	30' to the right of the spillway was decomm trash rack? applicable; spillway v vas decommissioned	siphon. Thes nissioned in the Not application was decomm	se areas must t ne past 10 years ble; spillway w issioned	be monitored. See	e Section IV, ite
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_	Auviliany	(Emorgonov)	Chillwo	( continued					
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Γ.	Auxiliary	(Emergency)	Spillway	/ continued					

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

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

#### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes. residences located at 19 and 23 Thistle Brooke Court and 1 and 2 Rosebay Drive.

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

i. Emergency Action Plan provided by owner?

No, EAP must be submitted on or before 3/7/15.

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 larger trees (on the entire dam and extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater) must be

evaluated by a qualified S.C. licensed professional engineer to determine if they should be removed. A tree management plan must be developed

to address the long-term plans for tree removal. Permits may be necessary for removal of the large trees; contact John Poole at 803-898-4212

to determine whether permits are necessary.

2. A qualified S.C. licensed professional engineer must evaluate the slopes and determine whether any work should be done to flatten out the slopes.

3. The large area of standing water must be evaluated by a qualified S.C. licensed professional engineer. This area of seepage should be monitored regularly

to ensure that the water does not become flowing and turbid. This would indicate a very serious situation and the Department should be notified immediately.

4. An updated hydraulic analysis must be done to ensure there is adequate spillway capacity. The analysis must be done by a qualified S.C. licensed professional

engineer. Repairs or modifications to the dam may be necessary depending on the results of the analysis. Permits are required for any modifications

or repairs to the dam.

5. The erosion must be evaluated by a qualified S.C. licensed professional engineer to determine whether the structural stability of the dam is affected

or whether repairs need to be made or additional erosion protection added to prevent additional erosion.

### 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.

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Could not observe due to flowing water

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

## Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DHEC ROMOTE PROTECT PROSPER	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9			
Section I (Owner's Info	mation)				
A. Dam Number: <b>D</b> <u>2897</u> &	Hazard Class <sup>2</sup>	B. Name of Dam: Brooks Pond			
C. Inspection Date ( <u>09/26</u> /20	<u>13</u> ) & Time: <u>12:02 p.m.</u>	D. Date of Last Inspection: (02/25/2011_)			
E. Location-County/City: Greenv	lle / Simpsonville	F. EQC Regional Office: Upstate, Greenville			
G. Inspector's Name: Melissa Dav	/kins, John Cobb				
H. Owner's Name: Estates at Gove	rnor's Lake HOA (EGLHOA) and N	eely Farm Homeowner's Association (NFHOA)			
I. Contact Person (if different f	rom above): <u>Amy Grimes (EG</u>	LHOA)			
J. Dam Owner's or Contact Pe	rson's Phone Numbers:	Home ()			
		Office ()			
K. Dam Owner's or Contact Pe	erson's mailing address:	Other ( )			
Address 1 1371 Dogwood Drive South, Conyers, GA 30012 and 40 Governors Lake Way, Simpsonville, SC 29680 (EGLHOA)					
Address 2 (optional) PO Box 17542, Greenville, SC 29606 (NFHOA)					
City	, 3				
Section II (Dam Condition General Condition Assessm a) Satisfactory b	on) ent (Select one of the f Fair c) Poor [	ollowing): ✔ d) Unsatisfactorye) Not Rated			
Section III (Dam Inspect     A. Dam Crest     i. Vegetation (grass, trees w     and removed.	eeds)? Vegetation, including v	veeds and grass, must be cut. Shrubs and other vegetation must be cut			
ii. Animal activity observed?	Could not inspect because of the	nick vegetation			
iii. Any obvious alteration or	repairs made? Could not	inspect because of thick vegetation			
iv. Erosion noticed on crest?	Could not inspect because of	of thick vegetation			
v. Any visible settlement, mis	alignment or cracks? _c	ould not inspect because of thick vegetation			
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#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Vegetation, including weeds and grass, must be cut. Shrubs and other vegetation must be cut

and removed. It appears that shrubs may have been planted along the edge of the water; these must be cu	t and removed.
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ii. Animal activity observed? Could not inspect because of thick vegetation

iii. Any obvious alterations or repairs made? Could not inspect because of thick vegetation

iv. Erosion observed on upstream slope? Could not inspect because of thick vegetation

v. Settlement or cracks visible in slope? Could not inspect because of thick vegetation

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Vegetation, including weeds and grass, must be cut. Shrubs and other vegetation must be cut and removed.

ii. Animal activity observed? Could not inspect because of thick vegetation

iii. Any obvious alterations or repairs made? Could not inspect because of thick vegetation

iv. Erosion observed on down stream slope? Could not inspect because of thick vegetation

v. Settlement or cracks visible in slope? Could not inspect because of thick vegetation

vi. Toe drains flowing? None observed, but the thick vegetation prevented complete inspection

vii. Any seepage observed? If so, describe location, None observed, but the thick vegetation prevented complete inspection flow rate, and any turbidity or color within the flow:

#### **D.** Primary Spillway

i. Any visible deterioration of structure? None observed

ii. Is there an obvious need to repair or replace trash rack? No tras

No trash rack on the siphon or vent pipe

iii. Any noticeable problems with debris? A turtle was clogging the siphon vent pipe, so the siphon continued to release water below the normal pool elevation. As long as you do not change the function of the siphon, you can add a trash guard around the siphon and vent pipe to prevent this from continuing (no permit would be necessary).

iv. Is valve or gate present? No

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? Yes, flow was observed from the right side of the outlet pipe. The source of flow could not be determined because of thick vegetation. You must inspect the area to determine the source. See item 2 under Section IV of this report.

ii. Describe any deflection or damage observed to the pipe:

Could not inspect because of thick vegetation

iii. Visible condition of outlet channel: Good

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? Thick vegetation was observed blocking the spillway. Vegetation, including weeds and grass, must

be cut. Shrubs and other vegetation must be cut and removed.

ii. Animal activity observed? Could not inspect because of thick vegetation

iii. Any noticeable deterioration in the approach or discharge channel? Yes, significant erosion was observed in the

discharge channel. This area needs to be observed regularly to ensure that erosion does not progress back toward the reservoir

iv. Any visible deterioration of structure's crest? Could not inspect because of thick vegetation

<b>F. Auxiliary (Emergency) Spillway continued</b> 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?
Yes, according to Greenville County GIS, houses on Dapple Gray Court, F	arming Creek Drive, and Chestnut Hill Place

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

i. Emergency Action Plan provided by owner?

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 vegetation must remain at a manageable level so that you can perform complete inspections of the dam and

No

associated structures on a regular basis.

2. Determine source of water flowing from the right of the outlet pipe. If it is from a toe drain, then submit to the Department

a photograph of the area and toe drain as documentation. If a toe drain is not the source, then a detailed inspection by a qualified,

licensed South Carolina professional engineer is required. Notify the Department immediately of the results of that inspection.

## 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.

ne of Dam: <u>Stonebrook Farm (formerly Spaulding Lake)</u> e of Last Inspection: ( <u>12</u> / <u>22</u> / <u>2011</u> ) C Regional Office: <u>Upstate EQC Greenville</u> Farrall (johnfarrall2@gmail.com), Jerry Hunter Home ( <u>864-4</u> <u>19-2278 (John)</u> Office ( <u>864-4</u> <u>44-8113 (Jay)</u> Other ( <u>864-288-7345 (Jerry)</u>						
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Other ( <u>864-288-7345</u> (Jerry)_						
Address 2 (optional)						
atisfactory e) Not Rated						
A. Dam Crest i. Vegetation (grass, trees weeds)? Grass and weeds in condition were observed.						
iii. Any obvious alteration or repairs made? None observed						
iv. Erosion noticed on crest? None observed						
iS						

## B. Upstream Slope

i. Vegetation (grass, trees weeds)? Weeds and woody vegetation were observed.

of the right sipho	i. Deep noies were observ		•				
iii. Any obv	vious alterations or	repairs made	e? None	observed			
iv. Erosion	observed on upstr	eam slope?	Yes, some e	rosion was observed ald	ong the water's e	edge. The entire	slope must be eva
by a qualified S.C.	icensed professional enginee	r to determine what r	epairs are need	ed to prevent further eros	ion. Slope protec	tion along the wate	er's edge may be ne
v Settleme	nt or cracks visible	in slope?	es some slou	ighing was observed. T	he entire slope	must be evaluat	ted by a qualified
licensed professi	onal engineer to determine	what repairs are r	leeded to prev	vent further erosion.			
C. Down Str	eam Slope	•					
i. Vegetati	on (grass, trees we	eds)? Grass	and weeds we	re observed on the ma	iority of the slor	pe. Thick vegetat	tion. includina we
trees. shrubs. bru	sh. and other deleterious	/egetation. were of	oserved along	the toe of the slope. So	ee Section IV. i	tems 2 and 3.	, 3
ii. Animal a	activity observed?	None observed		•	,		
	vious alterations or	renairs mad	22 A sma	Il disturbed area was o	bserved around	the left sinhon (	
III. Ally OD			dene te fiv e h	ad isint. The seil should			contentity being us
	water level); according to	wir. Cox, this was o		ad joint. The soil should	a be replaced a	nd the area re-co	ompacied.
IV. Erosion	observed on down	stream slop	eres, a	large eroded area (appr	oximately 20° x 2	20') was observed	a on the right side
primary spillway,	at the toe. A small amount	of erosion was als	o observed ne	ear the crest on the left	side of the spil	lway.	
v. Settleme	nt or cracks visible	in slope? Y	es, cracks we	re visible near the large	e eroded area o	on the right side of	of the spillway.
vi. Toe drai	ns flowing? A pipe	was exposed in th	e large erode	d area. It is unknown w	hether this was	a toe drain. No	flows were comin
	nage cheer and 1	an denariha	location	Vac a large wat area		on the right side	ann ravin ataly 20
flow roto	page observed? II	so, describe	ho flow	Yes, a large wet area	a was observed	on the right side,	, approximately 30
now rate, a	nd any turbidity or	color within t	ne now:	the primary spillway,	, just beyond th	e toe. Another la	arge wet area was
observed on the li							
D. Primary S i. Any visib was undercut and ii. Is there a	off side along the toe. Stand Spillway e deterioration of s the rebar was exposed. S an obvious need to	ing water was obse Structure? <u>Y</u> Gee Section IV, iter repair or rep	rved approxim 'es, a large erc n 5 for informa lace trash	ately 20' from the toe, 1 oded area was observed ation about the right sip n rack? Not appl	5' to the left of th d on the right sic hon (inoperable icable	ne outlet channel. le of the spillway, e).	. See Section IV, it , at the toe. The sp
D. Primary S i. Any visib was undercut and ii. Is there a	eft side along the toe. Stand Spillway e deterioration of s the rebar was exposed. S an obvious need to	ing water was obse structure? <u>Y</u> See Section IV, iter repair or rep	rved approxim res, a large erc n 5 for informa lace trash	ately 20' from the toe, 19 oded area was observed ation about the right sip n rack? Not appl	5' to the left of th d on the right sic hon (inoperable icable	e outlet channel. le of the spillway, e).	, at the toe. The s
<b>D. Primary S</b> i. Any visib was undercut and ii. Is there a iii. Any noti	eft side along the toe. Stand Spillway e deterioration of s d the rebar was exposed. S an obvious need to ceable problems w	ing water was obse structure? <u>Y</u> See Section IV, iter repair or rep rith debris?	rved approxim res, a large erc n 5 for informa lace trash	ately 20' from the toe, 19 oded area was observed ation about the right sip a rack? Not appli observed on the bottom	5' to the left of th d on the right sic hon (inoperable icable n left side of the	e outlet channel. le of the spillway, e).	. See Section IV, it , at the toe. The sp , at the toe. The sp , at the toe. The toe
<b>D. Primary S</b> i. Any visib was undercut and ii. Is there a iii. Any noti iv. Is valve	eft side along the toe. Stand Spillway e deterioration of s a the rebar was exposed. S an obvious need to ceable problems w or gate present?	ing water was obse structure? <u>Y</u> see Section IV, iter repair or rep rith debris?	rved approxim ies, a large erc n 5 for informa lace trash	ately 20' from the toe, 19 oded area was observed ation about the right sip In rack? Not appl observed on the bottom	5' to the left of th d on the right sic hon (inoperable icable	e outlet channel. le of the spillway, s).	. See Section IV, it , at the toe. The sp hould be removed
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F	Δuviliary	(Emergency)	Snillway	continued
Γ.	Auxilialy	(Entergency)	Spillway	continueu

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

vi. If applicable, any visible leakage below concrete spillway? None observed

#### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes. residence at 733 Moore Road.

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

i. Emergency Action Plan provided by owner?

No, EAP must be submitted on or before 3/8/15.

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:

Note that the lake was lowered 2-3' during the inspection.

1. The holes and burrows must be evaluated by a qualified SC licensed professional engineer to determine whether the structural stability of the dam

is affected and what repairs need to be made to prevent erosion and piping in these areas. All harmful animal species must be removed from the

dam in a legal manner to prevent further damage. Repairs must be made to the holes and burrows. Depending on the extent of the damage, permits

may be necessary for the repairs; contact John Poole at 803-898-4212 to determine whether permits are necessary.

2. The thick vegetation, including weeds, small trees, shrubs, brush, and other deleterious vegetation, must be cut and removed from the entire

dam and extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater. Portions of the dam could not be

inspected due to the thick vegetation. The vegetation must remain at a manageable level so that you can perform complete inspections of the dam

and associated structures on a regular basis to ensure safe operation of the dam. Once the thick vegetation has been removed, an appropriate

ground cover must be established. Grass is the ideal ground cover for a dam.

See attached sheet for additional comments.

### 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.

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

## Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

D H E C	Preliminary I Regulated I	nspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9					
Section I (Owner's Info	rmation)						
A. Dam Number: <b>D</b> <u>2903</u> 8	Hazard Class <sup>2</sup>	B. Name of Dam: <u>Shannon Lake</u>					
C. Inspection Date ( <u>12/11/2</u> 0	) <u>1</u> 4) & Time: <u>11:00 a.m.</u>	D. Date of Last Inspection: ( <u>12 / 22 / 2011</u> )					
E. Location-County/City: Green	/ Greenville	F. EQC Regional Office: Upstate EQC Greenville					
G. Inspector's Name: Melissa Da	wkins						
H. Owner's Name: Shannon Lake	Inc.						
I. Contact Person (if different	from above): Gordon Thruston						
J. Dam Owner's or Contact P	erson's Phone Numbers:	Home ( <u>864-2</u> 88-1588-(Gordon)					
		Office ( )					
K. Dam Owner's or Contact F Address 1 <u>122 Shannon Lake</u> Address 2 (optional)	K. Dam Owner's or Contact Person's mailing address:       Other ( )         Address 1 122 Shannon Lake Circle						
City Greenville, State SC Zip Code 29615							
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 v	A. Dam Crest i. Vegetation (grass, trees weeds)? Grass and straw were in place. Monitor any bare areas and re-seed as necessary						
ii. Animal activity observed	ii. Animal activity observed? None observed						
iii. Any obvious alteration or	repairs made? In 2013 or	2014, the crest was leveled to 892'.					
iv. Erosion noticed on crest	? None observed						
v. Any visible settlement, m	salignment or cracks? No.	one observed					
DHEC 2604 (Rev 11/2011)							

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Grass and straw were in place. Some bare areas were observed. Monitor these areas and re-seed as necessary.

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? Riprap was added at the water's edge for slope protection.

iv. Erosion observed on upstream slope? None observed

v. Settlement or cracks visible in slope? None observed

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? The thick vegetation, including weeds, brush, and other deleterious vegetation, must be cut and removed from the entire dam and extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater. See Section IV, item 1.

ii. Animal activity observed? None observed but could not fully inspect due to thick vegetation

iii. Any obvious alterations or repairs made? None observed but could not fully inspect due to thick vegetation

iv. Erosion observed on down stream slope? None observed but could not fully inspect due to thick vegetation

V. Settlement or cracks visible in slope? Some undulations were observed on the left side. Other drop-offs (possible sloughing) were noticed but could not be inspected because of thick vegetation.

vi. Toe drains flowing? None seen

vii. Any seepage observed? If so, describe location, Yes, an area of seepage was observed on the left side, near the groin, down to flow rate, and any turbidity or color within the flow: the toe. Based on the engineer's report dated 6/28/13, there were significant flows from this area. See Section IV, items 2 and 3. The bottom 1/3 of the dam was wet in this area.

#### **D.** Primary Spillway

i. Any visible deterioration of structure? Primary spillway was decommissioned. The Department has no record of this outlet structure

being removed. A siphon was also installed; no visible deterioration of the siphon was observed.

ii. Is there an obvious need to repair or replace trash rack?

Not applicable; primary spillway decommissioned

iii. Any noticeable problems with debris? Not applicable; primary spillway decommissioned. No problems with debris were observed

for the siphon.

iv. Is valve or gate present? Not applicable; primary spillway decommissioned

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? The outlet of the siphon was inspected. No flows outside

the pipe were observed but could not fully inspect because of flowing water and thick vegetation.

ii. Describe any deflection or damage observed to the pipe:

flowing water

iii. Visible condition of outlet channel: Good, little to no erosion

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? The earthen spillway on the right was evaluated here; however, with the original primary spillway decommissioned,

this spillway is flowing regularly (at the same elevation as the siphon) and was flowing during the inspection.

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? Yes, erosion was observed along the spillway.

Because it is not confirmed that bedrock is present along the entire length of the spillway, repairs to the erosion in the spillway must be made. See Section IV, item 4.

iv. Any visible deterioration of structure's crest? Yes, erosion was observed along the spillway.

DHEC 2604 (Rev 11/2011)

None observed but could not fully inspect because of

F. Auxiliary (Emergency) Spillway continued
v. If applicable, any observed exposure of rebar reinforcement? Not applicable
vi. If applicable, any visible leakage below concrete spillway? Not applicable
H. Downstream/Hazard Class Issues
i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes
residences at 108 Shannon Lake Circle, 837-850 Woodsford Drive, 422-440 Windbrooke Circle, and along Wyndham Court
I. Emergency Action Plan (EAP)
i. Emergency Action Plan provided by owner? No, EAP must be submitted on or before 3/8/15.
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. Thick vegetation was observed on the lower third of the dam on the left side. Portions of the dam could not be inspected due to the thick

vegetation. The vegetation must remain at a manageable level so that you can perform complete inspections of the dam and associated structures

on a regular basis to ensure safe operation of the dam. Once the thick vegetation has been removed, an appropriate ground cover must be

established. Grass is the ideal ground cover for a dam. The debris along the groin must also be removed.

2. A plan must be developed to measure seepage (flow rate and turbidity) in these areas at least monthly. Submit the plan to the Permitting Section in

Columbia for approval (John Poole, SCDHEC Dams and Reservoir Permitting, 2600 Bull Street, Columbia, SC 29201). The seepage measurements must be

recorded at least monthly and should be correlated to the stage in the reservoir at the time of the measurement. Based on the measurements, a plan to control the

seepage may also be required. According to the engineer's report dated 6/28/13, a long-term recommendation was to install a toe drain. This

may be required based on the seepage measurements.

See attached sheet for additional comments.

### 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

September 24, 2013

### CERTIFIED MAIL 7009 2250 0001 0102 9877

Mr. Will Merritt Gap Creek LLC ITS 3759 Highway 153 Powdersville, SC 29611

RE: Inspection of Moon Lake Dam D-2911, Greenville County

Dear Mr. Merritt:

On March 1, 2013, I conducted a routine visual inspection of the Moon Lake Dam. I also conducted a follow-up inspection on September 16, 2013 and confirmed that the items noted in the March 1, 2013 inspection report had not been addressed. Copies of both inspection reports are attached, along with pictures of items observed. The Department strongly recommends that the lake be drained until a qualified South Carolina licensed professional engineer thoroughly inspects the dam and prepares a detailed analysis of the hydraulic adequacy and structural stability of the dam. This analysis is required to be submitted to the Department on or before October 24, 2013.

Because there are multiple owners of this dam and associated structures, please note that you and the other property owner(s) must work together to address all of the deficiencies with the dam and spillway and to complete and submit the *Surveillance, Emergency Notification, and Action Plan for South Carolina Regulated Dams* (Form D2606). The other property owner(s) is copied on this letter; see inspection report dated 9/16/13 for updated contact information.

Below is a discussion of the major items of concern noted during the inspection:

- Thick vegetation on the upstream and downstream slopes needs to be mowed and small shrubs and small trees cut. The removal of larger trees needs to be evaluated by a qualified South Carolina licensed professional engineer. Permits may be necessary for removal of trees; contact John Poole at 803-898-4212 to determine whether permits are necessary.
- Significant erosion was observed in the emergency spillway, and flows were being conveyed through the spillway at the time of the inspection. This erosion may affect the structural stability of the dam.
- A large area of erosion/ gully was observed between the outlet pipe and the emergency spillway. This may affect the structural stability of the dam.
- Animal trails were observed on the upstream and downstream slopes of the dam. The dam should be evaluated to determine if any animal burrows are present, as these may affect the structural stability of the dam.
- As noted in the inspection report, portions of the dam could not be inspected due to the presence of thick vegetation; a complete inspection of the dam should be completed when the vegetation has been removed.

Return all documentation required by this letter to SCDHEC—Upstate Region EQC, Greenville, 200 University Ridge, Greenville, SC 29601.

Enclosed are two copies of a Dams and Reservoirs Emergency Notification Plan. Please complete the forms, retain a copy for your use, and return the other copy to this office to be placed in your dam's file. The agencies listed on your copy of the Emergency Alert Notification Plan can provide service in the case of an emergency and should all be notified immediately should a dam failure be imminent.

Provisions to the S.C. Dams and Reservoirs Safety Act require the owner to notify the Department within 30 days of transferring title or the control of his dam to someone else. Please notify our office should control of your dam be transferred.

Please feel free to call me with any questions or concerns. As a Class 2 Dam, the next routine inspection for this dam is scheduled to be performed during or before March 2016.

If you have any questions, please contact me at 864-241-1090.

Sincerely,

Melissa M. Dawkins, P.E. Regional Engineer Upstate EQC Region—Greenville Office

cc: John Poole, P.E.—Bureau of Water S. Michael Bruce







2: Emergency spillway conveying flow



4: Large gully/ area of erosion between outlet pipe and emergency spillway



6: Thick vegetation prevented access to outlet pipe



5: Animal trails on the downstream slope







2: Thick vegetation around the outlet pipe



3: Emergency spillway conveying flow

O H E C	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9
Section I (Owner's Infor	mation)	
A. Dam Number: <b>D</b> <u>2914</u> &	Hazard Class <sup>2</sup>	_ B. Name of Dam: H.C. Harper Lake
C. Inspection Date ( <u>12/17</u> /20	1 <u>3</u> ) & Time: <u>12:30 p.m.</u>	_ D. Date of Last Inspection: ( <u>12_/21_/2010_</u> )
E. Location-County/City: Greenvi	le / Simpsonville	_ F. EQC Regional Office: Upstate EQC Greenville
G. Inspector's Name: Melissa Daw	kins	
H. Owner's Name: Timberland Capi	al Investments	
I. Contact Person (if different f	om above): Jeff Drummond	(jeff@latone.net)
J. Dam Owner's or Contact Pe	rson's Phone Numbers	:: Home ()
		Office ( <u>864</u> ) <u>242</u> - <u>3811</u>
	roop's mailing address	Other ( <u>864</u> ) <u>420</u> - <u>2358</u>
A durant de DO Bay 0207	rson's mailing address	
Address 1 <u>P.O. Box 9297</u>		
Address 2 (optional)		
Section II (Dam Condition General Condition Assessme a) Satisfactory b)	on) ent (Select one of the Fair ✔ c) Poor	following): d) Unsatisfactorye) Not Rated
Section III (Dam Inspect	ION Checklist)	
A. Dam Crest i. Vegetation (grass, trees w	eeds)? Grass in good condit	ion was observed.
ii. Animal activity observed?	None observed	
iii. Any obvious alteration or r	epairs made? None obs	served
iv. Erosion noticed on crest?	None observed	
v. Any visible settlement, mis pipe through the dam. This area should be	alignment or cracks?	A dip/ area of settlement was observed on the crest, above the outlet Carolina licensed professional engineer.
DHEC 2604 (Rev 11/2011)		

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Thick vegetation, including weeds, trees, shrubs, brush, and other deleterious vegetation, must be cut and removed. Portions of the dam could not be inspected due to the thick vegetation. See Section IV, items 1 and 2.

ii. Animal activity observed?	Yes, animal trails were observed. Monitor the dam regularly to ensure that harmful animal species are
not present. Remove using legal means, as r	Incressary

iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation

iv. Erosion observed on upstream slope? Erosion was observed along the water's edge. This area should be evaluated by a qualified South Carolina licensed professional engineer to determine if slope protection needs to be added to prevent further erosion. See Section IV, item 3

v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Thick vegetation, including weeds, trees, shrubs, brush, and other deleterious vegetation, must be cut and removed. Portions of the dam could not be inspected due to the thick vegetation. See Section IV, items 1 and 2.

ii. Animal activity observed? Yes, animal trails were observed. Monitor the dam regularly to ensure that harmful animal species are not present. Remove using legal means, as necessary.

iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation

iv. Erosion observed on down stream slope? None observed but could not fully inspect because of thick vegetation

v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation

vi. Toe drains flowing? None observed

vii. Any seepage observed? If so, describe location, Areas of seepage were observed around the outlet pipe in the channel (to flow rate, and any turbidity or color within the flow: the left) where the bank is undercut and on the downstream slope (bottom 1/2 of the dam), extending approximately 50' to the left and 100' to the right of the outlet pipe. See Section IV, item 4.

#### **D.** Primary Spillway

i. Any visible deterioration of structure? None observed

ii. Is there an obvious need to repair or replace trash rack? None observed

iii. Any noticeable problems with debris? None observed

iv. Is valve or gate present? Yes, valve is present. According to Mr. Drummond, it is operated on a regular basis by the fishing club that has

#### has access to the lake.

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? None observed; however, the flows from the outlet

Could not observe because of flowing water

pipe were surging and spurting. This is not a typical situation and should be evaluated by a qualified South Carolina licensed professional engineer.

ii. Describe any deflection or damage observed to the pipe:

iii. Visible condition of outlet channel: No erosion was observed near the outlet pipe.

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? A dead tree was observed and should be removed. Make sure the spillway is maintained free of debris.

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? Erosion was observed along the water's edge.

See item B.iv above.

iv. Any visible deterioration of structure's crest? None observed

F Auviliary	(Emergency)	Snillway	v continued
	(Lincigeney)	Opiniva	

v. If applicable, any observed exposure of rebar reinforcement? Not applicable

vi. If applicable, any visible leakage below concrete spillway? Not applicable

#### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification?

Yes, house at 218 White Drive and trailers at the creek crossing with White Drive. I could not tell if additional trailers had been added since the previous determination was made in 2000.

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

i. Emergency Action Plan provided by owner?

No, EAP must be submitted on or before 10/16/14.

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 vegetation must remain at a manageable level so that you can perform complete inspections of the dam and associated structures

on a regular basis to ensure safe operation of the dam.

2. Large trees were observed on the upstream slope (left side) and downstream slope above the outlet pipe in the middle of the slope and around

the outlet pipe/ creek bed area. The larger trees must be evaluated by a qualified South Carolina licensed professional engineer to determine

if they should be removed. A tree management plan must be developed to address the long-term plans for tree removal. Permits may be necessary

for removal of the large trees; contact John Poole at 803-898-4212 to determine whether permits are necessary.

3. Permits may be necessary for the addition of slope protection; contact John Poole at 803-898-4212 to determine whether permits are necessary.

4. An area of possible seepage (standing water) was also observed approximately 200' to the right of the outlet pipe, beyond the tree line. The

seepage needs to be evaluated by a qualified SC licensed professional engineer to determine if structures need to be added to safely convey these flows

through the dam. A plan must be must developed to measure seepage (flow rate and turbidity) in these areas at least monthly. Submit the plan to

the Permitting Section in Columbia for approval (John Poole, SCDHEC Dams and Reservoir Permitting, 2600 Bull Street, Columbia, SC 29201). The seepage

measurements must be recorded at least monthly and should be correlated to the stage in the reservoir at the time of the measurement.

## 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.

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

## Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Inspection Report for South Carolina Regulated Dams and Impoundment Structures Regulations R.72-1 through R.72-9				
Section I (Owner's Information	Section I (Owner's Information)				
A. Dam Number: D 2915 & Hazard Class 2 B. Name of Dam: South Tyger WCD 4/ Mush Creek					
C. Inspection Date ( <u>11/25/20</u> <u>13</u> ) &	Time: 12:15 p.m.       D. Date of Last Inspection: (12//09/2010_)				
E. Location-County/City: Greenville	/ Travelers Rest F. EQC Regional Office: Upstate, Greenville				
G. Inspector's Name: Melissa Dawkins, Joh	in Cobb				
H. Owner's Name: Beaver Run Homeowner's As	ssociation (owner-BR)/ Greenville County Soil & Water Conservation District (operator-GCSWCD)				
I. Contact Person (if different from at	DOVE): Kirsten Robertson				
J. Dam Owner's or Contact Person's	Phone Numbers: Home ()				
	Office ( <u>864</u> ) <u>467</u> - <u>2755</u>				
K. Dam Owner's or Contact Person's	Other ()				
Address 1 100 Beaver Run Drive (BR); 30	01 University Ridge Ste 4800 (GCSWCD)				
Address 2 (optional)					
City Travelers Rest (BR); Greenville (GCSW	CD)         State SC         Zip Code 29690 (BR); 29601 (GCSWCD)				
Section II (Dam Condition) General Condition Assessment (S	elect one of the following):				
a) Satisfactory b) Fair	c) Poor     d) Unsatisfactory     e) Not Rated				
Section III (Dam Inspection C	Section III (Dam Inspection Checklist)				
A. Dam Crest i. Vegetation (grass, trees weeds)? Grass in good condition					
ii. Animal activity observed? None observed					
iii. Any obvious alteration or repairs made? None observed					
iv. Erosion noticed on crest? None observed					
v. Any visible settlement, misalignment or cracks? None observed					
DHEC 2604 (Rev 11/2011)					

B. Upstream Slope i. Vegetation (grass, trees weeds)? Grass in good condition

ii. Animal activity observed? Yes, holes, possibly animal burrows, were observed. These area	as must be filled and compacted and
monitored on a regular basis to ensure that no burrowing animals are present.	
III. Any obvious alterations of repairs made? None observed	
iv. Erosion observed on upstream slope? None observed	
v. Settlement or cracks visible in slope? None observed	
C. Down Stream Slope	
i. Vegetation (grass, trees weeds)? Grass in good condition was observed on the majority of the	e downstream slope. A patch of trees on th
left side was observed. These trees should be evaluated by a licensed SC professional engineer to determine whether it is	safe for them to remain. See Section IV, item
II. Animal activity observed? None observed	
iii. Any obvious alterations or repairs made? None observed	
iv. Erosion observed on down stream slope? Yes, continue to monitor the same area to	hat was noted on the previous inspection
report for erosion. The area is on the right side, midway between the groin and the outlet pipe.	
v. Settlement or cracks visible in slope? Yes, some sloughing, possibly caused by equipment	ent tracks, was observed. The Departme
recommends that you fill in and smooth out these areas with compacted soil and then re-establish grass.	
vi. Toe drains flowing?Yes. The toe drain should be cleaned out so it does not become clogged.	
vii Any seenage observed? If so describe location None observed	
flow rate and any turbidity or color within the flow.	
ii. Is there an obvious need to repair or replace trash rack? No	
iii. Any noticeable problems with debris? None observed	
iv. Is valve or gate present? Yes	
E. Outlet Pipe	
i. Any water visibly flowing or leaking outside of the discharge pipe?	served
II. Describe any denection of damage observed to the pipe: <u>None ob</u>	served
iii. Visible condition of outlet channel: Good to provide was observed	
F. Auxiliary (Emergency) Spillway	
i. Noticeable obstructions to flow? None observed	
ii. Animal activity observed? None observed	
iii. Any noticeable deterioration in the approach or discharge channel? None	observed
iv. Any visible deterioration of structure's crest? None observed	
C 2604 (Rev 11/2011)	

F. Auxiliary (Emergency) Spillway continued	
v. If applicable, any observed exposure of rebar reinforcement?	Not applicable
vi. If applicable, any visible leakage below concrete spillway?	Not applicable
H. Downstream/Hazard Class Issues	
i. Any noticeable changes immediately downstream of the dam t	that affects the hazard classification?
None observed from the dam's crest	
I. Emergency Action Plan (EAP)	
i. Emergency Action Plan provided by owner? No	
ii. Does EAP contains emergency alert notification plan? If so, w	vhen was it last updated?
iii. Does EAP contain specific actions to take if the dam has faile	ed or is near failure?
Section IV (Conclusions)	
General comments and recommendations:	
1. Permits may be necessary for removal of the large trees; contact John Poole at 803	3-898-4212 to determine whether permits are necessary.

## **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.

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

## Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9			
Section I (Owner's Info	Section I (Owner's Information)				
A. Dam Number: <b>D</b> <u>4034</u>	& Hazard Class <sup>2</sup>	B. Name of Dam: Laurel Lake			
C. Inspection Date ( <u>12/19</u> /2	0 <u>1</u> 4) & Time: <u>11:15 a.m.</u>	D. Date of Last Inspection: (12/22/2011_)			
E. Location-County/City: Green	nville / Greenville	F. EQC Regional Office: Upstate EQC Greenville			
G. Inspector's Name: Melissa D	awkins				
H. Owner's Name: Laurel Lake H	omeowners' Association c/o Norcon	Property Managers LLC			
I. Contact Person (if different	from above): <u>xxxxxxxxxxxxx</u>				
J. Dam Owner's or Contact F	erson's Phone Numbers:	Home ()			
		Office ( <u>864</u> ) <u>284</u> - <u>6515</u>			
K. Dam Owner's or Contact I Address 1 P.O. Box 17542 (N	K. Dam Owner's or Contact Person's mailing address:				
Address 2 (optional)	Address 7 (optional)				
City Greenville	S	State SC Zip Code 29606 -			
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, weeds, and moss in good condition were observed.					
ii. Animal activity observed	ii. Animal activity observed? A possible animal trail was observed 10' to the left of the deck.				
iii. Any obvious alteration o	iii. Any obvious alteration or repairs made? None observed				
iv. Erosion noticed on cres	iv. Erosion noticed on crest? None observed				
v. Any visible settlement, m	v. Any visible settlement, misalignment or cracks? None observed				
DHEC 2604 (Rev 11/2011)					

	ation (grass, trees weeds)?
ii. Anim	al activity observed?
iii. Any o	obvious alterations or repairs made?
iv. Erosi	on observed on upstream slope?
v. Settle	ment or cracks visible in slope?
<b>. Down</b> i. Veget	Stream Slope ation (grass, trees weeds)?
ii. Anim	al activity observed?
iii. Any o	obvious alterations or repairs made?
iv. Erosi	on observed on down stream slope?
v. Settle	ment or cracks visible in slope?
vi. Toe c	rains flowing?
<b>. Primar</b> i. Any vis	y Spillway sible deterioration of structure?
II. Is thei	e an obvious need to repair or replace trash rack?
ii. Is thei iii. Any r	e an obvious need to repair or replace trash rack?
ii. Is thei iii. Any r iv. Is val	re an obvious need to repair or replace trash rack?
ii. Is thei iii. Any r iv. Is val <b> Outlet</b> i. Any wa	re an obvious need to repair or replace trash rack?
ii. Is thei iii. Any r iv. Is val <b>. Outlet</b> i. Any wa	re an obvious need to repair or replace trash rack?   oticeable problems with debris?   ve or gate present?   Pipe   ater visibly flowing or leaking outside of the discharge pipe?   be any deflection or damage observed to the pipe:
ii. Is thei iii. Any r iv. Is val <b>. Outlet</b> i. Any wa ii. Descr	re an obvious need to repair or replace trash rack?
ii. Is thei iii. Any r iv. Is val <b>. Outlet</b> i. Any wa ii. Descr iii. Visibl <b>. Auxilia</b> . Noticea	re an obvious need to repair or replace trash rack?
ii. Is thei iii. Any r iv. Is val <b>. Outlet</b> i. Any wa ii. Descr iii. Visibl <b>. Auxilia</b> . Noticea	e an obvious need to repair or replace trash rack?
ii. Is thei iii. Any r iv. Is val <b>. Outlet</b> i. Any wa ii. Descr iii. Visibl <b>Auxilia</b> . Noticea i. Anima	re an obvious need to repair or replace trash rack?

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

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

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

#### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification?

### I. Emergency Action Plan (EAP)

i. Emergency Action Plan provided by owner?

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:

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## INSTRUCTIONS

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

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E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

## Section III (Dam Inspection Checklist):

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## Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9			
Section I (Owner's Info	Section I (Owner's Information)				
A. Dam Number: <b>D</b> <u>4239</u> 8	Hazard Class <sup>2</sup>	B. Name of Dam: <u>Nine Times Dam</u>			
C. Inspection Date $(03/08/20)$	) <u>13</u> ) & Time:	D. Date of Last Inspection: (02/03/2010_)			
E. Location-County/City: Picker	s / Pickens	F. EQC Regional Office: Greenville			
G. Inspector's Name: Melissa Da	wkins				
H. Owner's Name: Dam: Adam Fig	sher Jr.; Reservoir: David Vorpagel,	Don Worth, John Mincey, Rudy Stancell			
I. Contact Person (if different	from above): David Vorpagel				
J. Dam Owner's or Contact P	erson's Phone Numbers	Home ( <u>864_)</u> <u>878</u> - <u>1055</u>			
		Office ()			
K. Dam Owner's or Contact F	erson's mailing address:	Other ()			
Address 1 105 Well Springs Dr	ive (Adam Fisher) 135 Slippery Roo	ck Drive (David Vorpagel)			
Address 2 (optional)					
City <u>Pickens</u> , State <u>SC</u> Zip Code <u>29671</u>					
Section II (Dam Condition)         General Condition Assessment (Select one of the following):         a) Satisfactory       b) Fair         b) Fair       c) Poor         d) Unsatisfactory       e) Not Rated         Section III (Dam Inspection Checklist)					
A. Dam Crest i. Vegetation (grass, trees weeds)? Road and grass in good condition					
ii. Animal activity observed? None observed					
iii. Any obvious alteration or	iii. Any obvious alteration or repairs made? None observed				
iv. Erosion noticed on crest	iv. Erosion noticed on crest? None observed				
v. Any visible settlement, m	v. Any visible settlement, misalignment or cracks? None observed				
DHEC 2604 (Rev 11/2011)					

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Grass

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? None observed

iv. Erosion observed on upstream slope? Yes, small area to the right of the riser.

v. Settlement or cracks visible in slope? None observed

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Grass, moss and water-loving vegetation present. Dead tree on downstream slope needs to be monitored to ensure that the decaying roots do not create seepage pathways.

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? None observed

iv. Erosion observed on down stream slope? Yes, large area erosion was observed on right side; it appears that the water running down the hill and road needs to be diverted into the reservoir and not be allowed to flow down the downstream slope.

v. Settlement or cracks visible in slope? Some sloughing observed

vi. Toe drains flowing? No toe drains were seen; however, the plans show toe drains. You need to locate the toe drains and unclog/ repair them.

vii. Any seepage observed? If so, describe location, Yes, the entire bottom half of the slope was soft and water-loving vegetation flow rate, and any turbidity or color within the flow: was observed. This could be due to the toe drains not functioning properly. This area needs to be closely monitored to determine whether the seepage areas begin flowing or become turbid

#### **D.** Primary Spillway

i. Any visible deterioration of structure? Riser spillway: Not accessible for inspection. Four pipes spillway: None observed. The riprap area

needs to be closely monitored to ensure that no flows are coming under the riprap and that the erosion beyond the pad does not progress back under the pad.

ii. Is there an obvious need to repair or replace trash rack? Riser spillway: Not accessible for inspection. Four pipes

#### spillway: Not applicable

iii. Any noticeable problems with debris? Riser spillway: None observed. Four pipes spillway: None observed

iv. Is valve or gate present? Riser spillway: None seen in reservoir. Four pipes spillway: None observed

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? None observed but pipe was flowing so difficult to inspect

ii. Describe any deflection or damage observed to the pipe:

flowing. Damage to the end of the pipe was observed; this needs to be inspected by an engineer to ensure that damage not progressing back into dam.

Could not inspect interior because the pipe was

iii. Visible condition of outlet channel: Good

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? None observed

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? Significant erosion was observed beyond the

riprap pad for the four pipes spillway and emergency spillway. The area needs to be monitored as described in item D.i above.

iv. Any visible deterioration of structure's crest? None observed
_	A		C	
г.	Auxiliary	(Emergency)	Spillway	continueu

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

vi. If applicable, any visible leakage below concrete spillway? None observed

#### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes. house at 863 Nine Times Road.

No

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

i. Emergency Action Plan provided by owner?

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. Alteration/ repair to riser and flows spurting from outlet pipe: Detailed analysis of the hydraulic adequacy and structural

stability of the dam needs to be done by a qualified, licensed SC professional engineer.

2. Deterioration of outlet pipe and flows spurting from outlet pipe: Thorough inspection needs to be done by a qualified,

licensed SC professional engineer to ensure that deterioration not progressing back into dam.

3. Power poles on downstream slope: These should be closely monitored to ensure that they do not create seepage pathways.

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DHEC 2604 (Rev 11/2011)

Not applicable

# INSTRUCTIONS

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

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# Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

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D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

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# Section II (Dam Condition):

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

# Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9		
Section I (Owner's Info	rmation)			
A. Dam Number: <b>D</b> <u>4314</u> 8	Hazard Class <sup>2</sup>	B. Name of Dam: <u>Half Mile Lake</u>		
C. Inspection Date ( <u>04/24</u> /20	) <u>15</u> ) & Time: <u>2:00 p.m.</u>	D. Date of Last Inspection: (04_/03_/2012_)		
E. Location-County/City: Green	ville / Greenville	F. EQC Regional Office: Upstate EQC Greenville		
G. Inspector's Name: Melissa Da	wkins (Matt Raven also attended)			
H. Owner's Name: Half Mile Lake	Homeowners Association			
I. Contact Person (if different	from above): Tom Hancock			
J. Dam Owner's or Contact P	erson's Phone Numbers:	Home ()		
		Office ()		
K. Dam Owner's or Contact F Address 1 P.O. Box 3591	erson's mailing address:	Other ( <u>864-91</u> β-8137 (Tom mobile)		
Address 2 (optional)				
City Greenville State SC Zin Code 29608 -				
Section II (Dam Condition)         General Condition Assessment (Select one of the following):         a) Satisfactory       b) Fair         b) Fair       c) Poor         d) Unsatisfactory       e) Not Rated				
A. Dam Crest i. Vegetation (grass, trees weeds)? Grass and weeds in good condition were observed. There were bare spots along the walking trail. The walking trail should be stabilized (grass, gravel, mulch) to prevent erosion. Crape myrtles were still in place on the crest. See Section IV, item 1. ii. Animal activity observed? None observed				
iii. Any obvious alteration or	repairs made? None obs	erved		
iv. Erosion noticed on crest	? None observed. Monitor the	e walking trail.		
v. Any visible settlement, m	salignment or cracks?	lone observed		
DHEC 2604 (Rev 11/2011)				

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Grass and weeds in good condition were observed.

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? None observed

iv. Erosion observed on upstream slope? Yes, erosion was observed along the water's edge (approximately 1' high with some undulations). Monitor this area to ensure that it does not worsen. If it does, then repairs need to be done; permits may be necessary for those repairs.

v. Settlement or cracks visible in slope? None observed

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Grass and weeds with a few bare areas were observed. The bare areas should be reseeded and monitored to ensure grass is established. Large trees were observed around the concrete walls for the outlet pipe. See Section IV, item 1.

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? None observed

iv. Erosion observed on down stream slope? None observed

v. Settlement or cracks visible in slope? None observed

vi. Toe drains flowing? None seen. Drains inside the walls of the outlet pipe are not toe drains; according to Mr. Hancock, those are in place to relieve pressure behind the walls.

vii. Any seepage observed? If so, describe location, Yes, an area of flowing seepage was observed at the bottom of the emergency flow rate, and any turbidity or color within the flow: spillway, with the bottom 1/3 of the spillway being soggy and wet. The seepage flows through the trees and enters the creek to the left of the outlet pipe. See Section IV, item 2.

#### **D. Primary Spillway**

i. Any visible deterioration of structure? None observed

ii. Is there an obvious need to repair or replace trash rack? None observed

iii. Any noticeable problems with debris? None observed

iv. Is valve or gate present? Yes, according to Mr. Hancock, it has been operated in the last 10 years.

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? None observed but could not fully inspect due to flowing water

ii. Describe any deflection or damage observed to the pipe: A couple of pipe joints near the reservoir may be

deteriorated and appeared to have some leakage. At least one other pipe joint was wet. See Section IV, item 3.

iii. Visible condition of outlet channel: Good with little to no erosion observed. An aerial sewer line crossing is downstream.

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? Some debris was piled in the spillway. it must removed immediately.

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? Yes, erosion was observed at the water's edge

#### in the approach channel.

iv. Any visible deterioration of structure's crest? None observed

F. Auxiliary (Emergency) Spillway continue
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v. If applicable, any observed exposure of rebar reinforcement? None observed

vi. If applicable, any visible leakage below concrete spillway? None observed

#### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes, residences at 121 and 122 Nature Trail, Greenville 29609

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

i. Emergency Action Plan provided by owner?

No, updated EAP must be submitted on or before 9/17/15.

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 crape myrtles and large trees (diameter > 4", on the entire dam and extending one-half the height of the dam beyond the toe or 25'

beyond the toe, whichever is greater) must be evaluated by a qualified South Carolina licensed professional engineer to determine

if they should be removed. A tree management plan must be developed to address the long-term plans for tree removal. Permits may

be necessary for removal of the large trees; contact David Graves at 803-898-4398 to determine whether permits are necessary.

2. The limits of the seepage area should be marked so that you can determine if the area is increasing in size. A plan must be developed to measure

seepage (flow rate and turbidity) in this area at least monthly. Submit the plan to the Permitting Section in Columbia for approval (David Graves,

SCDHEC Dams and Reservoir Permitting, 2600 Bull Street, Columbia, SC 29201). The seepage measurements must be recorded

at least monthly and should be correlated to the stage in the reservoir at the time of the measurement.

3. The outlet pipe must be evaluated by a qualified S.C. licensed professional engineer to determine whether the deterioration of the

joints has caused or could cause issues with safety of the structure and whether the pipe should be repaired. As part of this evaluation,

the inside of the pipe must be inspected. Permits would be necessary for repair/ replacement of this pipe.

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C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

# Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

# Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Iı Regulated D	nspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9				
Section I (Owner's Infor	Section I (Owner's Information)					
A. Dam Number: <b>D</b> <u>4396</u> &	Hazard Class <sup>2</sup>	B. Name of Dam: <u>Stanley McJunkin Dam</u>				
C. Inspection Date ( <u>03/13</u> /20	<u>13)</u> & Time: <u>3:45 p.m.</u>	D. Date of Last Inspection: ( <u>01/14/2010</u> )				
E. Location-County/City: Pickens	/ Dacusville	F. EQC Regional Office: Greenville				
G. Inspector's Name: Melissa Dav	kins					
H. Owner's Name: Stanley McJunk	n					
I. Contact Person (if different f	om above):					
J. Dam Owner's or Contact Pe	rson's Phone Numbers:	Home ()				
		Office ()				
K. Dam Owner's or Contact Pe Address 1 <u>P.O. Box 1675</u>	erson's mailing address:	Other ( <u>864</u> ) <u>420</u> - <u>0735</u>				
Address 2 (optional)	Address 2 (optional)					
City Easley , State SC Zip Code 29641 -						
Section II (Dam Condition General Condition Assessm a) Satisfactory by Section III (Dam Inspect	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 w	A. Dam Crest i. Vegetation (grass, trees weeds)? Driveway and grass, good condition					
ii. Animal activity observed?	None observed					
iii. Any obvious alteration or	epairs made? None obser	ved				
iv. Erosion noticed on crest?	None observed					
v. Any visible settlement, mis	alignment or cracks? No	ne observed				
DHEC 2604 (Rev 11/2011)						

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Grass, good condition

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? No alterations or repairs to dam observed; beach area added in reservoir

iv. Erosion observed on upstream slope? None observed

v. Settlement or cracks visible in slope? None observed

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Grass in good condition on most of the slope. At the toe of the slope, around the outlet pipe, small trees and brush need to be cut.

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? None observed

iv. Erosion observed on down stream slope? Small bare areas were observed. Also, erosion was observed around the small building on the dam. Measures should be taken to prevent water from the building from causing erosion and the bare areas must be stabilized.

v. Settlement or cracks visible in slope? None observed

vi. Toe drains flowing? Yes, some of them. Also, one of the toe drains on the right side appears to be broken and clogged with iron bacteria. You must inspect this and repair/ unclog the toe drain to ensure it is working properly.

vii. Any seepage observed? If so, describe location, None observed flow rate, and any turbidity or color within the flow:

#### **D. Primary Spillway**

i. Any visible deterioration of structure? None observed

ii. Is there an obvious need to repair or replace trash rack?

None observed

iii. Any noticeable problems with debris? Debris was observed around the primary spillway; the debris should be removed immediately.

iv. Is valve or gate present? None observed

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? Yes, this may be due to a clogged or broken toe drain

or some other source. You must inspect the area to determine the source. See item 1 under Section IV of this report.

ii. Describe any deflection or damage observed to the pipe: Could not access the area to inspect. No damage

observed at end of pipe.

iii. Visible condition of outlet channel: Good

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? None observed

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? None observed

iv. Any visible deterioration of structure's crest? None observed

	(Emorgonov)	Spillway	continued
r. Auxillal y	(Emergency)	Spillway	y continueu

v. If applicable, any observed exposure of rebar reinforcement? Not ap

vi. If applicable, any visible leakage below concrete spillway? Not applicable

#### H. Downstream/Hazard Class Issues

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

#### 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?

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. Determine source of water flowing under outlet pipe. If due to a clogged/ broken toe drain, then repair and submit photo

documentation to the Department. If toe drain is not the source, then inspection by a qualified, licensed South Carolina

professional engineer is required. Notify the Department immediately of the results of the inspection.

# 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.

DHEC 2604 (Rev 11/2011)

Not applicable

# INSTRUCTIONS

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

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

# Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

# Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

# Section IV(Conclusions):

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

) H E C	Preliminary Inspection Regulated Dams an Re R.72-1	on Report for South Carolina d Impoundment Structures egulations through R.72-9			
Section I (Owner's Information)					
A. Dam Number: <b>D</b> <u>4513</u>	& Hazard Class <sup>2</sup> B. Na	me of Dam: Montebello Dam A			
C. Inspection Date ( <u>04/04/</u> 2	0 <u>1</u> <u>4</u> ) & Time: <u>9:50 a.m.</u> D. Da	te of Last Inspection: ( <u>04_/20_/2011_</u> )			
E. Location-County/City: Green	ville / Greenville F. EQ	C Regional Office: Upstate EQC Greenville			
G. Inspector's Name: Melissa D.	awkins				
H. Owner's Name: Montebello Ho	meowners' Association				
I. Contact Person (if different	from above): <u>Nancy McCrory</u>				
J. Dam Owner's or Contact F	erson's Phone Numbers:	Home ()			
		Office ( <u>864</u> ) <u>232</u> - <u>5543</u>			
		Other ( <u>864_) 505 8367_</u>			
K. Dam Owner's or Contact F	Person's mailing address:				
Address 1 P.O. Box 31034					
Address 2 (optional)					
Section II (Dam Condition)         General Condition Assessment (Select one of the following):         a) Satisfactory       b) Fair         b) Fair       c) Poor         d) Unsatisfactory       e) Not Rated					
Section III (Dam Inspec	ction Checklist)				
A. Dam Crest i. Vegetation (grass, trees weeds)? A road with storm drain system is in place on the crest.					
ii. Animal activity observed? None observed					
iii. Any obvious alteration of	repairs made? None observed				
iv. Erosion noticed on cres	None observed				
v. Any visible settlement, misalignment or cracks? Some cracks in the road parallel to the flow through the dam were observed. Monitor these cracks to ensure that they do not widen. If any changes in the widths are observed, then you should contact an engineer to evaluate them.					

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Grass in good condition was observed. A few bare areas were observed on the left side. These areas should be reseeded.

iii. Any obvious alterations or repairs made?       None observed         iv. Erosion observed on upstream slope?       None observed         v. Settlement or cracks visible in slope?       None observed         i. Vegetation (grass, trees weeds)?       Grass was observed on the upper half. Thick vegetation, including weeds, trees, brush, and other detention sequetation, was observed on the upper half. Thick vegetation         ii. Animal activity observed?       None observed but could not haly inspect because of thick vegetation         iii. Any obvious alterations or repairs made?       None observed but could not haly inspect because of thick vegetation         iv. Erosion observed on down stream slope?       None observed but could not haly inspect because of thick vegetation         iv. Settlement or cracks visible in slope?       None observed but could not haly inspect because of thick vegetation         vi. Toe drains flowing?       None seen         vii. Any seepage observed? If so, describe location, Yes, an area of seepage was observed on the left side, approximately 100° flow rate, and any turbidity or color within the flow:       down from the fire hydrant. The botton of the dam was soggy and wet from the fee hydrant was observed?         ii. Is there an obvious need to repair or replace trash rack?       None observed         iii. Any vatified betrioration of structure?       None observed to could not fully inspect because of flowing water         ii. Describe any deflection or damage observed to the pipe:       None observed but could not fully	ii. Animal activity observed? None observed
iii. Any obvious alterations or repairs made? <u>None observed</u> iv. Erosion observed on upstream slope? <u>None observed</u> v. Settlement or cracks visible in slope? <u>None observed</u> i. Vegetation (grass, trees weeds)? <u>Grass was observed on the upper half. Thick vegetation, including weeds, trees, brush, and other deleterious vegetation, was observed? <u>None observed on the upper half. Thick vegetation</u>, including weeds, trees, brush, and other deleterious vegetation, was observed? <u>None observed to trouble not taily inspect because of thick vegetation</u> iii. Any obvious alterations or repairs made? <u>None observed but could not taily inspect because of thick vegetation</u> iv. Erosion observed on down stream slope? <u>None observed but could not taily inspect because of thick vegetation</u> v. Settlement or cracks visible in slope? <u>None observed but could not taily inspect because of thick vegetation</u> v. Erosion observed? If so, describe location, <u>Yes</u>, an area of seepage use observed on the darw was sogger and well torm in the to approximately 30 from these the sequetate but could not taily inspect because of thick vegetation v. Toe drains flowing? <u>None seen</u> vii. Any seepage observed? If so, describe location, <u>Yes</u>, an area of seepage was observed on the darw was sogger and well torm into to approximately 30 from these the sequetate but could not fully inspect because of thick vegetation veloce approximately 1007 flow rate, and any turbidity or color within the flow: <u>down tom the lengenge</u> was observed in the darw so sogger and well torm <u>of the target sectors</u> of the sector of structure? <u>None observed</u> ii. Is there an obvious need to repair or replace trash rack? <u>None observed</u> iii. Any value or gate present? <u>None sectored</u> iii. Describe any deflection or damage observed to the pipe: <u>None observed but could not fully inspect because</u> <i>i Rouge water</i> iii. Describe any deflection or damage observed to the pipe: <u>None observed but could not fully inspect because</u> <i>i flowing water</i> iii. Vesible condition of forulte ch</u>	
iv. Erosion observed on upstream slope?       None observed         v. Settlement or cracks visible in slope?       None observed         C. Down Stream Slope       .         i. Vegetation (grass, trees weeds)?       Crass was observed on the upper half. Thick vegetation, including weeds, trees, bruch, and other detertions vegetation, with observed?         iii. Animal activity observed?       None observed but could not fully inspect because of thick vegetation         iiii. Any obvious alterations or repairs made?       None observed but could not fully inspect because of thick vegetation         v. Erosion observed on down stream slope?       None observed but could not fully inspect because of thick vegetation         v. Erosion observed on down stream slope?       None observed but could not fully inspect because of thick vegetation         vi. Toe drains flowing?       None ween         vii. Any seepage observed? If so, describe location, Yes, an area of seepage was observed on the left side, approximately 100° flow rate, and any turbidity or color within the flow:       down from the fire hydrant. The bottom of the dam was seggy and wet form flow rate, and any turbidity or color within the flow:         vii. Any seepage observed? If so, describe location, Yes, an area of seepage was observed on the left side, approximately 100° flow rate, and any turbidity or color within the flow:       None observed         vii. To e drains flowing?       None weetalliet South Carolina licersed professional engineer. See Section IV, leen 3.         D. Primary Spillway	iii. Any obvious alterations or repairs made? None observed
v. Settlement or cracks visible in slope?       None observed         C. Down Stream Slope       i. Vegetation (grass, trees weeds)?       Grass was observed on the upper haft. Thick vegetation, including weeds, trees, brush, and other deleterious vegetation, was observed?         Iii. Any obvious alterations or repairs made?       None observed but could not fully inspect because of thick vegetation         iii. Any obvious alterations or repairs made?       None observed but could not fully inspect because of thick vegetation         iv. Erosion observed on down stream slope?       None observed but could not fully inspect because of thick vegetation         v. Settlement or cracks visible in slope?       None observed but could not fully inspect because of thick vegetation         vi. Toe drains flowing?       None seen         Vii. Any seepage observed? If so, describe location, test in the free hydrant. The bottom of the dam was soggy and wet from the toe to approximately 20 from the toe. The seepage must be evaluated by a qualified South Carolina licensed protessonal engineer. See Section IV, tem 3.         Derimary Spillway       I. Any visible deterioration of structure?       None observed         ii. Is there an obvious need to repair or replace trash rack?       None observed but could not fully inspect because of flowing water         iii. Any noticeable problems with debris?       None observed       None observed but could not fully inspect because of flowing water         ii. Nany objecable condition of outlet channel:       Deter was observed and must be renove	iv. Erosion observed on upstream slope? None observed
C. Down Stream Slope       i. Vegetation (grass, trees, break, and other determined on the low port half. Thick vegetation, including weeds, trees, break, and other determined back streaks, break and other determined by a space of the low port of	v. Settlement or cracks visible in slope? None observed
i. Vegetation (grass, trees weeds)? Grass was observed on the upper half. Thick vegetation, including weeds, trees, brush, and other deleterious vegetation, was observed on the lower portion. See Section IV, items 1 and 2. ii. Animal activity observed? None observed but could not fully inspect because of thick vegetation iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation v. Toe drains flowing? None seen vii. Any seepage observed? If so, describe location, Yes, an area of seepage was observed on the left side, approximately 100° flow rate, and any turbidity or color within the flow: down from the fire hydrant. The bottom of the dam was soggy and wet from the toe toppoximately 30 from the tee. The seepage must be evaluated by a qualified South Carolina licensed professional engineer. See Section IV, item 3. D. Primary Spillway i. Any visible deterioration of structure? None observed iii. Is there an obvious need to repair or replace trash rack? None observed iii. Any noticeable problems with debris? None observed to the pipe: None observed but could not fully inspect because of flowing water iii. Describe any deflection or damage observed to the pipe: None observed but could not fully inspect because of flowing water iii. Visible condition of outlet channel: Debris was observed and must be removed. Ensoin was observed must be evaluated by a qualified Scin Carolina is encessary to prevent further ens	C. Down Stream Slope
deleteriorius vegetation, was observed on the lower portion. See Section IV, items 1 and 2.         ii. Animal activity observed?       None observed but could not fully inspect because of thick vegetation         iii. Any obvious alterations or repairs made?       None observed but could not fully inspect because of thick vegetation         iv. Erosion observed on down stream slope?       None observed but could not fully inspect because of thick vegetation         v. Erosion observed on down stream slope?       None observed but could not fully inspect because of thick vegetation         v. Settlement or cracks visible in slope?       None observed but could not fully inspect because of thick vegetation         v. Toe drains flowing?       None seen         vii. Any seepage observed? If so, describe location, the fire hydrant. The bottom of the dam was soggy and wet form the to to approximately 100° flow rate, and any turbity or color within the flow: down rate, and any turbity or color within the flow: Mone observed         ii. Any visible deterioration of structure? None observed       None observed         iii. Any noticeable problems with debris? None observed       None observed         iii. Any water ii. Describe any deflection or damage observed to the pipe: None observed but could not fully inspect because of flowing water         iii. Visible condition of outlet channel: Debris was observed and must be removed. Erosion was observed in the outlet pipe. None observed? None observed?         iii. Visible condition of outlet channel: Debris was observed	i. Vegetation (grass, trees weeds)? Grass was observed on the upper half. Thick vegetation, including weeds, trees, brush, and other
ii. Animal activity observed? <u>None observed but could not fully inspect because of thick vegetation</u> iii. Any obvious alterations or repairs made? <u>None observed but could not fully inspect because of thick vegetation</u> iv. Erosion observed on down stream slope? <u>None observed but could not fully inspect because of thick vegetation</u> v. Erosion observed on down stream slope? <u>None observed but could not fully inspect because of thick vegetation</u> v. Erosion observed on down stream slope? <u>None observed but could not fully inspect because of thick vegetation</u> v. Erosion observed on down stream slope? <u>None observed but could not fully inspect because of thick vegetation</u> v. Erosion observed on cracks visible in slope? <u>None observed but could not fully inspect because of thick vegetation</u> vi. Toe drains flowing? <u>None seen</u> vii. Any seepage observed? If so, describe location, <u>Yes, an area of seepage was observed on the left side, approximately 100</u> flow rate, and any turbidity or color within the flow: <u>down from the fire hydrant. The bottom of the dam was soggy and wet from the toe to approximately 30 from the toe. The seepage must be evaluated by a qualified South Carolina licensed professional engineer. See Section IV, item 3. <b>D. Primary Spillway</b> i. Any visible deterioration of structure? <u>None observed</u> ii. Is there an obvious need to repair or replace trash rack? <u>None observed</u> iii. Is there an obvious need to repair or replace trash rack? <u>None observed</u> iii. None observed but could not fully inspect because of flowing water iii. Describe any deflection or damage observed to the pipe: <u>None observed but could not fully inspect because</u> of flowing water iii. Describe any deflection or damage observed and must be removed. Erosion was observed around the outer pipe; this must be avaluated by a qualified Sc. licensed professional engineer to determine what erosion protection is necessary to prevent further erosion. See Section IV, item 4. F. Auxiliary (Emergency) Spillway No emergency spillway; not applicab</u>	deleterious vegetation, was observed on the lower portion. See Section IV, items 1 and 2.
iii. Any obvious alterations or repairs made?       None observed but could not fully inspect because of thick vegetation         iv. Erosion observed on down stream slope?       None observed but could not fully inspect because of thick vegetation         v. Erosion observed on down stream slope?       None observed but could not fully inspect because of thick vegetation         v. Settlement or cracks visible in slope?       None observed but could not fully inspect because of thick vegetation         vi. Toe drains flowing?       None seen         vii. Any seepage observed? If so, describe location, test and any turbidity or color within the flow:       Yes, an area of seepage was observed on the left side, approximately 100' flow rate, and any turbidity or color within the flow:         Devinary Spillway       Devinary Spillway       Jone observed         i. Any visible deterioration of structure?       None observed         iii. Is there an obvious need to repair or replace trash rack?       None observed         iii. Any noticeable problems with debris?       None observed         iii. Any water visibly flowing or leaking outside of the discharge pipe?       None observed but could not fully inspect because of flowing water         iii. Describe any deflection or damage observed to the pipe:       None observed around the outlet pipe; this must be evaluated by a qualified S. Licensed professional engineer to detrain what erosion protection is necessary to prevent further erosion. See Section IV, item 4.         F. Auxiliary (Emergency) Spillway;	ii. Animal activity observed? None observed but could not fully inspect because of thick vegetation
iV. Erosion observed on down stream slope?       None observed but could not fully inspect because of thick vegetation         v. Settlement or cracks visible in slope?       None observed but could not fully inspect because of thick vegetation         vi. Toe drains flowing?       None seen         vii. Any seepage observed? If so, describe location, the fire hydrant. The bottom of the dam was soggy and wet from the toe to approximately 30° from the toe. The seepage must be evaluated by a qualified South Carolina licensed professional engineer. See Section IV. Item 3.         D. Primary Spillway       i. Any visible deterioration of structure? None observed         iii. Is there an obvious need to repair or replace trash rack? None observed       None observed         iii. Any noticeable problems with debris? None observed       None observed but could not fully inspect because of flowing water         ii. Us valve or gate present? None seen       None observed to the pipe: None observed but could not fully inspect because of flowing water         ii. Usible condition of outlet channel: Debris was observed to the pipe: None observed but could not fully inspect because of flowing water         iii. Visible condition of outlet channel: Debris was observed and must be removed. Erosion was observed around the outlet pipe: this must be evaluated by a qualified S.C. licensed professional engineer to determine what erosion protection is necessary to prevent further erosion. See Section IV, item 4.         F. Auxiliary (Emergency) Spillway       No emergency spillway; not applicable         ii. Any noticeable obstructions to flow? No em	iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation
v. Settlement or cracks visible in slope?       None observed but could not fully inspect because of thick vegetation         vi. Toe drains flowing?       None seen         vii. Any seepage observed? If so, describe location, for the fire hydrant. The bottom of the dam was soggy and wet from the toe tapproximately 30° from the fire hydrant. The bottom of the dam was soggy and wet from the toe tapproximately 30° from the toe. The seepage must be evaluated by a qualified South Carolina licensed professional engineer. See Section IV, item 3.         D. Primary Spillway       i. Any visible deterioration of structure?       None observed         ii. Is there an obvious need to repair or replace trash rack? None observed       None observed         iii. Any noticeable problems with debris?       None observed         iv. Is valve or gate present?       None seen         E. Outlet Pipe       None observed to the pipe:       None observed but could not fully inspect because of flowing water         iii. Describe any deflection or damage observed to the pipe:       None observed but could not fully inspect because of flowing water         iii. Visible condition of outlet channel:       Debris was observed and must be removed. Erosion was observed further erosion. See Section IV, item 4.         F. Auxiliary (Emergency) Spillway       No emergency spillway; not applicable         ii. Any noticeable deterioration to flow?       No emergency spillway; not applicable         ii. Any noticeable deterioration in the approach or discharge channel?       No emergenc	iv. Erosion observed on down stream slope? None observed but could not fully inspect because of thick vegetation
vi. Toe drains flowing?       None seen         vii. Any seepage observed? If so, describe location, Yes, an area of seepage was observed on the left side, approximately 100° flow rate, and any turbidity or color within the flow: down from the fire hydrant. The bottom of the dam was soggy and wet from the tee to approximately 30° from the toe. The seepage must be evaluated by a qualified South Carolina licensed professional engineer. See Section IV, Item 3.         D. Primary Spillway       i. Any visible deterioration of structure?       None observed         iii. Is there an obvious need to repair or replace trash rack?       None observed         iii. Any noticeable problems with debris?       None observed         iv. Is valve or gate present?       None seen         E. Outlet Pipe       None observed to the pipe:         i. Any water visibly flowing or leaking outside of the discharge pipe?       None observed but could not fully inspect because of flowing water         iii. Visible condition of outlet channel:       Debris was observed and must be removed. Erosion was observed but could not fully inspect because or flowing water         iii. Visible condition of outlet channel:       Debris was observed and must be removed. Erosion was observed further erosion. See Section IV, item 4.         F. Auxiliary (Emergency) Spillway       No emergency spillway; not applicable         ii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway; not applicable         iii. Any visible deterioration of structure's crest? <t< td=""><td>v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation</td></t<>	v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation
vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: down from the fire hydrant. The bottom of the dam was soggy and wet from the tee to approximately 30 from the tee. The seepage must be evaluated by a qualified South Carolina licensed professional engineer. See Section IV, item 3.         D. Primary Spillway       i. Any visible deterioration of structure? None observed         ii. Is there an obvious need to repair or replace trash rack? None observed       None observed         iii. Any noticeable problems with debris? None observed       None observed         iii. Any water visibly flowing or leaking outside of the discharge pipe?       None observed but could not fully inspect because of flowing water         iii. Usible condition of outlet channel: Debris was observed and must be removed. Erosion was observed around the outlet pipe; this must be evaluated by a qualified S.C. licensed professional engineer to determine what erosion protection is necessary to prevent further erosion. See Section IV, item 3.         F. Auxiliary (Emergency) Spillway       No emergency spillway; not applicable         ii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway; not applicable         iii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway; not applicable	vi. Toe drains flowing? None seen
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E. Outlet Pipe       i. Any water visibly flowing or leaking outside of the discharge pipe?       None observed but could not fully inspect because         of flowing water       ii. Describe any deflection or damage observed to the pipe:       None observed but could not fully inspect because         of flowing water       iii. Describe any deflection of outlet channel:       Debris was observed and must be removed. Erosion was observed around the outlet pipe; this must be         evaluated by a qualified S.C. licensed professional engineer to determine what erosion protection is necessary to prevent further erosion. See Section IV, item 4.         F. Auxiliary (Emergency) Spillway         i. Noticeable obstructions to flow?         No emergency spillway; not applicable         iii. Animal activity observed?         No emergency spillway; not applicable         iv. Any visible deterioration of structure's crest?         No emergency spillway; not applicable	None seen
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evaluated by a qualified S.C. licensed professional engineer to determine what erosion protection is necessary to prevent further erosion. See Section IV, item 4.         F. Auxiliary (Emergency) Spillway <ul> <li>i. Noticeable obstructions to flow?</li> <li>No emergency spillway; not applicable</li> </ul> ii. Animal activity observed?       No emergency spillway; not applicable         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway; not applicable         iv. Any visible deterioration of structure's crest?       No emergency spillway; not applicable	iii. Visible condition of outlet channel: Debris was observed and must be removed. Erosion was observed around the outlet pipe; this must be
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ii. Animal activity observed?       No emergency spillway; not applicable         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway; not applicable         iv. Any visible deterioration of structure's crest?       No emergency spillway; not applicable	F. Auxiliary (Emergency) Spillway           i. Noticeable obstructions to flow?   No emergency spillway; not applicable
ii. Animal activity observed?       No emergency spillway; not applicable         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway; not applicable         iv. Any visible deterioration of structure's crest?       No emergency spillway; not applicable	
iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway; not applicable         iv. Any visible deterioration of structure's crest?       No emergency spillway; not applicable	ii. Animal activity observed? No emergency spillway; not applicable
iv. Any visible deterioration of structure's crest? No emergency spillway; not applicable	iii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway; not applicable
	iv. Any visible deterioration of structure's crest? No emergency spillway; not applicable

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

v. If applicable, any observed exposure of rebar reinforcement? No emergency spillway; not applicable

vi. If applicable, any visible leakage below concrete spillway? No emergency spillway; not applicable

#### H. Downstream/Hazard Class Issues

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

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

i. Emergency Action Plan provided by owner?

No, EAP must be submitted on or before 1/2/15.

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 thick vegetation must be cut and removed from the entire dam and extending one-half the height of the dam beyond the toe or 25' beyond the

toe, whichever is greater. Portions of the dam could not be inspected due to the thick vegetation. The vegetation must remain at a manageable level

so that you can perform complete inspections of the dam and associated structures on a regular basis to ensure safe operation of the dam.

Once the thick vegetation has been removed, an appropriate ground cover must be established. Grass is the ideal ground cover for a dam.

2. The larger trees (on the entire dam and extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is

greater) must be evaluated by a qualified South Carolina licensed professional engineer to determine if they should be removed.

A tree management plan must be developed to address the long-term plans for tree removal. Permits may be necessary for removal of

the large trees; contact John Poole at 803-898-4212 to determine whether permits are necessary.

3. This area of seepage should be monitored regularly to ensure that the water does not become flowing and turbid. This would indicate

a very serious situation and the Department should be notified immediately.

4. Permits may be necessary for the repairs; contact John Poole at 803-898-4212 to determine whether permits are necessary.

### 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.

# INSTRUCTIONS

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

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

# Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

# Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

# Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Ins Regulated Da F	spection Report for South Carolina ims and Impoundment Structures Regulations R.72-1 through R.72-9			
Section I (Owner's Info	Section I (Owner's Information)				
A. Dam Number: <b>D</b> <u>4514</u>	& Hazard Class <sup>2</sup>	B. Name of Dam: Montebello Dam B			
C. Inspection Date $(\underline{04}/\underline{04}/2$	0 <u>14</u> ) & Time: <u>10:25 a.m.</u>	D. Date of Last Inspection: (04/20/2011_)			
E. Location-County/City: Green	ville / Greenville	F. EQC Regional Office: Upstate EQC Greenville			
G. Inspector's Name: Melissa Da	awkins				
H. Owner's Name: Montebello Ho	meowners' Association				
I. Contact Person (if different	from above): Nancy McCrory				
J. Dam Owner's or Contact F	erson's Phone Numbers:	Home ()			
		Office ( <u>864</u> ) <u>232</u> - <u>5543</u>			
K. Dam Owner's or Contact F Address 1 <u>P.O. Box 31034</u>	Person's mailing address:	Other ( <u>864</u> ) <u>505</u> - <u>8367</u> _			
Address 2 (optional)	Address 2 (optional)				
City Greenville, State SC Zip Code 29608					
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 and weeds in good condition were observed.         ii. Animal activity observed?       None observed					
iv. Erosion noticed on cres	? None observed				
v. Any visible settlement, m	v. Any visible settlement, misalignment or cracks? None observed DHEC 2604 (Rev 11/2011)				

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Grass and weeds in good condition were observed on the majority of the slope. Could not inspect under the deck.

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? Unpermitted alterations (deck installed) were observed. A qualified S.C. licensed professional engineer must certify that the modifications that were done to the dam (deck) are in accordance with S.C. Regulation 72-1 through 72-9. iv. Erosion observed on upstream slope? Yes, a large hole was observed on the right side near the deck. Erosion was observed along the water's edge, near and under the deck. Monitor this area to ensure that it does not worsen. See Section IV, item 1. v. Settlement or cracks visible in slope? None observed C. Down Stream Slope i. Vegetation (grass, trees weeds)? Weeds were observed on the upper half. Land-clearing debris (mentioned in the previous report) and thick vegetation, including weeds, trees, brush, and other deleterious vegetation, were observed on the lower portion. See Section IV, items 2, 3, and 4. ii. Animal activity observed? None observed but could not fully inspect because of thick vegetation iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation iv. Erosion observed on down stream slope? None observed but could not fully inspect because of thick vegetation v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation vi. Toe drains flowing? None seen vii. Any seepage observed? If so, describe location, Yes, an area of seepage was observed approximately 10' to the left of the outlet flow rate, and any turbidity or color within the flow: pipe. The seepage must be evaluated by a qualified S.C. licensed professional engineer. This area of seepage should be monitored regularly to ensure that the water does not become flowing and turbid. See Section IV, item 5. **D. Primary Spillway** i. Any visible deterioration of structure? None observed ii. Is there an obvious need to repair or replace trash rack? None observed iii. Any noticeable problems with debris? None observed iv. Is valve or gate present? None seen E. Outlet Pipe i. Any water visibly flowing or leaking outside of the discharge pipe? None observed ii. Describe any deflection or damage observed to the pipe: Yes, some deflection/ damage was observed in the top of the last section of pipe. This must be evaluated by a qualified S.C. licensed professional engineer. iii. Visible condition of outlet channel: The outlet channel was full of debris; this must be removed immediately. Large holes were observed along the channel near the area of seepage mentioned in item III.C.vii above. This must be evaluated by a qualified S.C. licensed professional engineer. F. Auxiliary (Emergency) Spillway i. Noticeable obstructions to flow? No emergency spillway; not applicable ii. Animal activity observed? No emergency spillway; not applicable iii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway; not applicable iv. Any visible deterioration of structure's crest? No emergency spillway; not applicable DHEC 2604 (Rev 11/2011)

F.	Auxiliarv	(Emergency)	Spillway	continued
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v. If applicable, any observed exposure of rebar reinforcement?

vi. If applicable, any visible leakage below concrete spillway? Not applicable

#### H. Downstream/Hazard Class Issues

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

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

i. Emergency Action Plan provided by owner?

No, EAP must be submitted on or before 1/2/15.

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. This area should be evaluated by a qualified South Carolina licensed professional engineer to determine if slope protection needs to be

added to prevent further erosion. Permits may be necessary for the addition of slope protection; contact John Poole at 803-898-4212.

2. The land-clearing debris must be removed immediately.

3. The thick vegetation, including small trees, must be cut and removed from the entire dam and extending one-half the height of the dam beyond the toe

or 25' beyond the toe, whichever is greater. Portions of the dam could not be inspected due to the thick vegetation. The vegetation must remain

at a manageable level so that you can perform complete inspections of the dam and associated structures on a regular basis to ensure safe operation

of the dam. Once the thick vegetation has been removed, an appropriate ground cover must be established. Grass is the ideal ground cover for a dam.

4. The larger trees (on the entire dam and extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater) must

be evaluated by a qualified South Carolina licensed professional engineer to determine if they should be removed. A tree management plan must be

developed to address the long-term plans for tree removal. Permits may be necessary for removal of the large trees; contact John Poole at

803-898-4212 to determine whether permits are necessary.

5. This would indicate a very serious situation and the Department should be notified immediately.

### 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.

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Not applicable

# INSTRUCTIONS

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

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

# Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

# Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

# Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary I Regulated D	nspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9			
Section I (Owner's Info	Section I (Owner's Information)				
A. Dam Number: <b>D</b> <u>4515</u> 8	A Hazard Class <sup>2</sup>	B. Name of Dam: Montebello Dam D			
C. Inspection Date $(\underline{04}/\underline{04}/2)$	0 <u>1</u> 4) & Time: <u>11:15 a.m.</u>	D. Date of Last Inspection: (04/20/2011_)			
E. Location-County/City: Green	ville / Greenville	F. EQC Regional Office: Upstate EQC Greenville			
G. Inspector's Name: Melissa Da	wkins				
H. Owner's Name: Montebello Ho	meowners' Association				
I. Contact Person (if different	from above): <u>Nancy McCrory</u>				
J. Dam Owner's or Contact P	erson's Phone Numbers:	Home ()			
		Office ( <u>864</u> ) <u>232</u> - <u>5543</u>			
K. Dam Owner's or Contact F	erson's mailing address:	Other ( <u>864</u> ) <u>505</u> - <u>8367</u>			
Address 1 P.O. Box 31034					
Address 2 (optional)					
City <u>Greenville</u> , State <u>SC</u> Zip Code <u>29608</u>					
Section II (Dam Condit         General Condition Assessm         a) Satisfactory         b         Section III (Dam Inspect         A. Dam Crest         i. Vegetation (grass, trees of         ii. Animal activity observed         iii. Any obvious alteration of         iv. Erosion noticed on crest	Section II (Dam Condition)         General Condition Assessment (Select one of the following):         a) Satisfactory       b) Fair         b) Fair       c) Poor         d) Unsatisfactory       e) Not Rated         Section III (Dam Inspection Checklist)         A. Dam Crest         i. Vegetation (grass, trees weeds)?         A road is in place across the crest.         ii. Animal activity observed?         None observed         iii. Any obvious alteration or repairs made?         None observed				
v. Any visible settlement, m	salignment or cracks? No	ne observed			
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#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Grass in good condition was observed on the majority of the slope. A few bare areas were observed

iii. Any obvious alterations or repairs made? <u>None observed</u> V. Erosion observed on upstream slope? <u>None observed</u> V. Settlement or cracks visible in slope? <u>None observed</u> V. Settlement or cracks visible in slope? <u>None observed</u> V. Settlement or cracks visible of the slope. Thick vegetation including trees, bunch, observed on most of the slope. Thick vegetation (grass, trees weeds)? Grass and weeds were observed on most of the slope. Thick vegetation (like metal alternative sequence) and the top bear erases were observed on most of the slope. Thick vegetation in the deletinos sequetation, we deserved? <u>None observed to could not tuly inspect lower portion due to thick vegetation</u> iii. Any obvious alterations or repairs made? <u>None observed but could not tuly inspect lower portion due to thick vegetation</u> v. Erosion observed on down stream slope? <u>None observed but could not tuly inspect lower portion due to thick vegetation</u> v. Settlement or cracks visible in slope? <u>None observed but could not tuly inspect lower portion due to thick vegetation</u> v. Settlement or cracks visible in slope? <u>None observed but could not tuly inspect lower portion due to thick vegetation</u> vi. Toe drains flowing? <u>None seen</u> vii. Any seepage observed? If so, describe location, <u>two spectron books</u> <b>Primary Spillway</b> i. Any visible deterioration of structure? <u>Boh fraer structures were evaluated as primary spillway</u> . The tat outlet structure is on the later anotype protocol were observed.  ii. Is there an obvious need to repair or replace trash rack? <u>A small amount of dobits was observed on the trash rack of the undet structure. No edescination of the structure were observed.  ii. Any voliceable problems with debris? <u>None observed</u>  ii. Any voliceable problems with debris? <u>None observed</u>  ii. Any voliceable problems with debris? <u>None observed</u>  iii. Any voliceable problems with debris? <u>None observed</u>  iii. Any voliceable obstructions of flow? <u>No emergency spillway observed</u>  iii. Animal activity observed? <u>No eme</u></u>		ii. Animal activity	y observed? None observed
iv. Erosion observed on upstream slope?       None observed         v. Settlement or cracks visible in slope?       None observed         iv. Vegetation (grass, frees weeds)?       Grass and weeds were observed on most of the slope. Thick wegetation, including trees, bruch, other detentions wegetation, were observed along the too. Bare areas were observed on most of the slope. Thick wegetation         iii. Animal activity observed?       None observed but could not fully inspect lower portion due to thick wegetation         iiii. Any obvious alterations or repairs made?       None observed but could not fully inspect lower portion due to thick wegetation.         iv. Erosion observed on down stream slope?       None observed but could not fully inspect lower portion due to thick vegetation.         iv. Erosion observed?       None observed but could not fully inspect lower portion due to thick vegetation.         iv. For slope and any turbidity or color within the flow:       None observed but could not fully inspect lower portion due to thick vegetation.         vii. Any vespage observed?       If so, describe location, None seen; significant amount of ion bacteria was present in outlet pp flow rate, and any turbidity or color within the flow:       None streamed.         i. Any visible deterioration of structure?       Bon niser structures were evaluated as primary spillway. The 1st cutter structure is on the lating downstream. The 2nd outlet structure is on the left. No deterioration of attructure was observed on the trash rack of the attructure. Nakes ure this is removed periodically.         iii. Any noticeable problems wit	iv. Erosion observed on upstream slope? <u>None observed</u> v. Settlement or cracks visible in slope? <u>None observed</u> i. Vegetation (grass, trees weeds)? <u>Grass and weeds were observed on most of the slope. Thick vegetation, including trees, brush, ther determines weatered atong the too. Blue areas were observed on the tet slope. Thick vegetation iii. Animal activity observed? <u>None observed but could not fully inspect lower portion due to thick vegetation</u> iii. Any obvious alterations or repairs made? <u>None observed but could not fully inspect lower portion due to thick vegetation</u> iv. Erosion observed on down stream slope? <u>None observed but could not fully inspect lower portion due to thick vegetation</u> iv. Erosion observed on down stream slope? <u>None observed but could not fully inspect lower portion due to thick vegetation</u> iv. Erosion observed on down stream slope? <u>None observed but could not fully inspect lower portion due to thick vegetation</u> iv. Erosion observed? If so, describe location, <u>None seen: significant amount of ion bacteria was present in outlet pip</u> flow rate, and any turbidity or color within the flow: <u>the signt. See Section D below</u>.  <b>Primary Spillway</b> i. Any visible deterioration of structure? <u>Both new structures were evaluated as primary spilway</u>. The 1st outlet structure is on the last hold to repair or replace trash rack? <u>Asmal amount of deris was observed on the trash rack of the distructure. Make sure this is removed periodically.  Iii. Shore and bovious need to repair or replace trash rack? <u>Asmal amount of deris was observed on the trash rack of the distructure. Make sure this is removed periodically.  Iii. Davide or gate present? <u>Yes, vakes were present on both outlet structures.  <b>Soutiet Pipe</b>  I. Any water visibly flowing or leaking outside of the discharge pipe? <u>No</u> water was observed leaking outside of either cipe.  <b>No</b> water wisible condition of outlet channel: <u>Good condition with liste to no erosion</u> <b>Auxiliary (Emergency) Spillway</b>  No emergency spillway observed  <b></b></u></u></u></u>	iii. Any obvious a	alterations or repairs made? None observed
v. Settlement or cracks visible in slope?       None observed         2. Down Stream Slope       i. Vegetation (grass, trees weeds)?       Grass and weeds were observed on the left side, near new hore construction. See Section IV, items 1, 2, 3, and iterations or repairs made?       None observed but could not fully inspect lower portion due to thick vegetation         iii. Animal activity observed?       None observed but could not fully inspect lower portion due to thick vegetation.         iv. Erosion observed on down stream slope?       None observed but could not fully inspect lower portion due to thick vegetation.         iv. Erosion observed on down stream slope?       None observed but could not fully inspect lower portion due to thick vegetation.         iv. Erosion observed?       None observed but could not fully inspect lower portion due to thick vegetation.         vi. For drains flowing?       None essent but could not fully inspect lower portion due to thick vegetation.         vii. Any seepage observed? If so, describe location, none seen: significant amount of iron bacteria was present in outlet pp flow rate, and any turbidity or color within the flow:       In right. See Section D below.         Defining downstatem. The 2nd outlet structure is on the left. No deterioration of either structure was observed.       I. Any visible deterioration of structure?         ii. Any volticeable problems with debris?       None observed       A small amount of debris was observed on the trash rack of the outlet structure. Make sure this is removed periodically.         iii. Any noticeable problems with deb	v. Settlement or cracks visible in slope? None observed  Down Stream Slope  i. Vegetation (grass, trees weeds)? Grass and weeds were observed on most of the slope. Thick wegetation, including trees, brush, ther deterious vegetation, use observed atong the toe. Bare areas were observed on most of the slope. Thick wegetation is a sole of the slope of the slope. Thick wegetation is a sole of the slope of the slope of the slope of the slope of the slope. Thick wegetation is a slope of the slope of	iv. Erosion obser	ved on upstream slope? None observed
V. Settlement or cracks visible in slope? <u>None observed</u> None observed on most of the slope. Thick vegetation, including trees, burk, here determine the source construction. See Section IV, items 1, 2, 3, a mill activity observed? <u>None observed but could not fully inspect lower portion due to thick vegetation</u> iii. Any obvious alterations or repairs made? <u>None observed but could not fully inspect lower portion due to thick vegetation</u> iv. Erosion observed on down stream slope? <u>None observed but could not fully inspect lower portion due to thick vegetation</u> iv. Erosion observed on down stream slope? <u>None observed but could not fully inspect lower portion due to thick vegetation</u> iv. Erosion observed on down stream slope? <u>None observed but could not fully inspect lower portion due to thick vegetation</u> iv. Erosion observed? If so, describe location, <u>None seen</u> vii. Any seepage observed? If so, describe location, <u>None seen</u> vii. Any seepage observed? If so, describe location, <u>None seen</u> vii. Any seepage observed? If so, describe location, <u>None seen</u> vii. Any visible deterioration of structure? <u>Both riser structures were evaluated as primary spillway</u> . The 1st outlet structure is on the tat. No deministry and outlet structure was observed. iii. Is there an obvious need to repair or replace trash rack? <u>A small amount of derive was observed on the trash rack of the outlet structure. Make sure this is removed periodically. iii. Any vater visibly flowing or leaking outside of the discharge pipe? <u>No water was observed leaking outside of either on the tat observed leaking outside of either structures. E. Outlet Pipe i. Any water visibly flowing or leaking outside of the discharge pipe? <u>No water was observed leaking outside of either on erosion</u> iii. Suble condition of outlet channel: <u>Good condition with little to ne erosion</u> iii. Subject condition of outlet channel: <u>Good condition with little to ne erosion</u> iii. Any noticeable deterioration in the approach or discharge channel? <u>No water was observed leak</u></u></u>	v. Settlement or cracks visible in slope? <u>None observed</u> Down Stream Slope  . Vegetation (grass, trees weeds)? <u>Grass and weeds were observed on most of the slope. Thick vegetation, including trees, brack, tree detentions vegetation, were adversed along the tile. Bare areas were observed on the left slope, frame home construction. See Section IV. Rems 1, 2, 3, at a fill. Animal activity observed? <u>None observed but could not fully inspect tower portion due to thick vegetation</u>  iii. Any obvious alterations or repairs made? <u>None observed but could not fully inspect tower portion due to thick vegetation</u>  v. Erosion observed on down stream slope? <u>None observed but could not fully inspect tower portion due to thick vegetation</u> v. Settlement or cracks visible in slope? <u>None observed but could not fully inspect tower portion due to thick vegetation</u> v. Settlement or cracks visible in slope? <u>None observed but could not fully inspect tower portion due to thick vegetation</u> v. Settlement or cracks visible in slope? <u>None observed but could not fully inspect tower portion due to thick vegetation</u> v. Settlement or cracks visible in slope? <u>None observed but could not fully inspect tower portion due to thick vegetation</u> v. Settlement or cracks visible in slope? <u>None observed but could not fully inspect tower portion due to thick vegetation</u> vi. Toe drains flowing? <u>None seen</u> vii. Any seepage observed? If so, describe location, <u>the right See Section D below</u>.  <b>Primary Spillway</b> i. Any visible deterioration of structure? <u>Both riser structures were evaluated as primary spillway</u>. The ta cuttet structure is on the fit. No deterioration of either structure was observed.  iii. Any noticeable problems with debris? <u>None observed</u>  v. Any visible deterioration or damage observed to the pipe: <u>No water was observed leaking outside of either outer pipe; Now</u> were was a significant amount of iron bacteria in the botom of the outel tipe from the tat outer. See Section IV, Ren 5.  iii. Describe any deflection or damage obse</u>		
Cooler Stream Slope     i. Vegelation (grass, trees weeds)? Grass and weeds were observed on most of the slope. Thick vegetation, including tress, brueh, other determines vegetation, web observed and the loss. Bure areas were observed on the left side, near new home construction. See Section IV, Items 1, 2, 3, a file. Animal activity observed? None observed but could not fully inspect lower portion due to thick vegetation.     iii. Any obvious alterations or repairs made? None observed but could not fully inspect lower portion due to thick vegetation.     iv. Erosion observed on down stream slope? None observed but could not fully inspect lower portion due to thick vegetation.     iv. Erosion observed on down stream slope? None observed but could not fully inspect lower portion due to thick vegetation.     iv. Settlement or cracks visible in slope? None observed but could not fully inspect lower portion due to thick vegetation.     vi. Toe drains flowing? None seen     vii. Any seepage observed? If so, describe location, None seen: significant amount of iron bacteria was present in outlet pip flow rate, and any turbidity or color within the flow: the right. See Section D below.     Derimary Spillway     i. Any visible deterioration of structure? Both riser structures were evaluated as primary spilway. The 1st outlet structure is on the fail. No demiser were evaluated as primary spilway. The 1st outlet structure is on the fail. No deterioration of either structures.     E Outlet Pipe     i. Any vater visibly flowing or leaking outside of the discharge pipe? No water was observed leaking outside of the discharge pipe?     i. Any water visibly flowing or leaking outside of the discharge pipe? No damage was observed leaking outside of either one erosion     iii. Describe any deflection or damage observed to the pipe: Norther was observed leaking outside of either one erosion     iii. Shible condition of outlet channel: <u>Good condition with litte to ne erosion     in vas a significant amount of inon bacteris in</u>	bown Stream Slope i. Vegetation (grass, trees weeds)? Grass and weeds were observed on most of the slope. Thick vegetation, including trees, brunk the detentions was observed along the too. Bure areas were observed on the lift side, near new hore construction. See Section IV, items 1, 2, 3, ar ii. Animal activity observed? None observed but could not fully inspect lower portion due to thick vegetation iii. Any obvious alterations or repairs made? None observed but could not fully inspect lower portion due to thick vegetation iv. Erosion observed on down stream slope? None observed but could not fully inspect lower portion due to thick vegetation iv. Erosion observed on down stream slope? None observed but could not fully inspect lower portion due to thick vegetation iv. Settlement or cracks visible in slope? None observed but could not fully inspect lower portion due to thick vegetation vi. Toe drains flowing? None seen vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: Primary Spillway i. Any visible deterioration of structure? Both riser structures were evaluated as primary spilway. The 1st outlet structure is on the structure was observed. ii. Is there an obvious need periodcaly. iii. Is there an obvious need periodcaly. iii. Is not erg at present? Yes, valves were present on both outlet structures. Coutlet Pipe i. Any valter visibly flowing or leaking outside of the discharge pipe? No water was observed to ether structure to the section of outlet channel: Good condition with life to no robin out the train the both outlet structure. Could Pipe i. Any valter visibly flowing or leaking outside of the discharge pipe? No water was observed to ether structure to no robin No stange was observed? Spillway Noticeable poblems with debris? None observed No stange was observed to effect on or damage observed to the pipe: No water was observed to ether structure is one flowing or leaking outside of the outlet pipe from the 1st outlet structure. See Section IV, it	v. Settlement or c	cracks visible in slope? None observed
Lower structure is the second along the too. Bare areas and weeds were observed on most of the slope. Thick vegetation, including trees, brush, other deleterous vegetation, was observed and the too. Bare areas were observed on the left side, near new home construction. See Section IV, items 1, 2, 3, at it. Animal activity observed? None observed but could not fully inspect lower portion due to thick vegetation.     III. Any obvious alterations or repairs made? None observed but could not fully inspect lower portion due to thick vegetation.     IV. Erosion observed on down stream slope? None observed but could not fully inspect lower portion due to thick vegetation.     IV. Erosion observed on down stream slope? None observed but could not fully inspect lower portion due to thick vegetation.     IV. Erosion observed on down stream slope? None observed but could not fully inspect lower portion due to thick vegetation.     IV. Erosion observed? If so, describe location, None seen: significant amount of ion bacteria was present in outlet pip flow rate, and any turbidity or color within the flow:     the right. See Section D below.     Primary Spillway     i. Any visible deterioration of structure? Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the left. No deterioration of either structure was observed.     II. Is there an obvious need to repair or replace trash rack? A small amount of debris was observed on the trash rack of the collect structure. Make sure this is removed periodically.     IV. Is valive or gate present? Yes, valves were present on both outlet structures.     E. Outlet Pipe     I. Any water visibly flowing or leaking outside of the discharge pipe? No water was observed to either outlet pip: how mare was significant amount of mon bacteria in the bottom of the outlet pipe from the tst outlet structure. See Section IV, item 5.     III. Describe any deflection or damage observed to the pipe: No water was observed to either outlet pip: how there was a sign	Lower stream subpression of the store o	C Down Stroom (	Slong
And address of the second of the second and give to be address with a desired of the desired	The determined segments, was been very as been very but could not fully inspect lower portion due to thick vegetation iii. Animal activity observed? None observed but could not fully inspect lower portion due to thick vegetation. ives on left must be re-seeded to ensure crossion does not occur. v. Settlement or cracks visible in slope? None observed but could not fully inspect lower portion due to thick vegetation. v. Settlement or cracks visible in slope? None observed but could not fully inspect lower portion due to thick vegetation. v. Settlement or cracks visible in slope? None observed but could not fully inspect lower portion due to thick vegetation. v. Settlement or cracks visible in slope? None observed but could not fully inspect lower portion due to thick vegetation. v. Settlement or cracks visible in slope? None observed but could not fully inspect lower portion due to thick vegetation. v. Settlement or cracks visible of slope? None observed but could not fully inspect lower portion due to thick vegetation. v. Settlement or cracks visible of slope? None observed but could not fully inspect lower portion due to thick vegetation. v. Settlement or cracks visible of slope? None observed but could not fully inspect lower portion due to thick vegetation. v. Settlement or cracks visible of slope? None observed but could not fully inspect lower portion due to thick vegetation. v. Settlement or cracks visible of slope? Slope? None observed but could not fully inspect lower portion due to thick vegetation. v. Settlement or cracks visible of slope? None observed were evaluated as primary spillway. The 1st outlet structure is on the slope? None observed. i. Any visible deterioration of structure? None observed i. Any value or gate present? Yes, valves were present on both outlet structures. <b>Soutiet Pipe</b> i. Any water visibly flowing or leaking outside of the discharge pipe? No water	i. Vegetation (gra	ass, trees weeds)? Grass and weeds were observed on most of the slope. Thick vegetation, including trees, brush
	An Annular activity observed? reals cleared un clear in the inspect form pation due to thick vegetation When observed but could not fully inspect lower portion due to thick vegetation. Iveras on left must be re-seeded to ensure erosion does not occur. V. Erosion observed on down stream slope? None observed but could not fully inspect lower portion due to thick vegetation. Iveras on left must be re-seeded to ensure erosion does not occur. V. Settlement or cracks visible in slope? None observed but could not fully inspect lower portion due to thick vegetation. V. Toe drains flowing? None seen Vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: Primary Spillway I. Any visible deterioration of structure? Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the acting domarteram. The 2nd outlet structure is on the flow on observed. II. Is there an obvious need to repair or replace trash rack? A small amount of derive was observed on the trash rack of the dust structure. Make sure this is removed periodically. III. Any voticeable problems with debris? None observed IV. Is valve or gate present? Yes, valves were present on both outlet structures. Coultet Pipe I. Any water visibly flowing or leaking outside of the discharge pipe? No water was observed to either outlet pipe: No durage was observed to either outlet pipe: No durage was observed to either outlet pipe. No durage was	ii Animal activity	i, was observed along the toe. Bare aleas were observed on the left side, hear new nome construction. See Section 1V, items 1, 2, 3, a
iii. Any obvious alterations or repairs made? None observed but could not fully inspect lower portion due to thick vegetation. iv. Erosion observed on down stream slope? None observed but could not fully inspect lower portion due to thick vegetation. areas on left must be re-seeded to ensure erosion does not occur. v. Settlement or cracks visible in slope? None observed but could not fully inspect lower portion due to thick vegetation. vi. Toe drains flowing? None seen vii. Any seepage observed? If so, describe location, the right. See Section D below. Derimary Spillway i. Any visible deterioration of structure? Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the facing downstream. The 2nd outlet structure is on the facing downstream. The 2nd outlet structure is on the facing downstream. The 2nd outlet structure is on the facing downstream. The 2nd outlet structure is on the facing downstream. 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See Section IV, tem 5. </td <td>iii. Any obvious alterations or repairs made?       None observed but could not fully inspect lower portion due to thick vegetation.         iv. Erosion observed on down stream slope?       None observed but could not fully inspect lower portion due to thick vegetation.         v. Settlement or cracks visible in slope?       None observed but could not fully inspect lower portion due to thick vegetation.         v. Settlement or cracks visible in slope?       None observed but could not fully inspect lower portion due to thick vegetation.         vi. Toe drains flowing?       None seen         viii. Any seepage observed? If so, describe location, the right. See Section D below.       None observed but could not fully inspect lower portion due to thick vegetation.         Primary Spillway       i. Any visible deterioration of structure?       Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the task node to repair or replace trash frack?       A small amount of debris was observed on the trash rack of the undet structure. Make sure this is removed periodically.         iii. Is there an obvious need to repair or replace trash frack?       A small amount of debris was observed on the trash rack of the undet structure. Make sure this is moved periodically.         iii. Any noticeable problems with debris?       None observed       No water was observed teaking outside of the pipe:         iii. Dascribe any deflection or damage observed to the pipe:       No damage was observed to either outer pipe; how rave was observed?         iiii. Visible condition of outlet channel:</td> <td></td> <td></td>	iii. Any obvious alterations or repairs made?       None observed but could not fully inspect lower portion due to thick vegetation.         iv. Erosion observed on down stream slope?       None observed but could not fully inspect lower portion due to thick vegetation.         v. Settlement or cracks visible in slope?       None observed but could not fully inspect lower portion due to thick vegetation.         v. Settlement or cracks visible in slope?       None observed but could not fully inspect lower portion due to thick vegetation.         vi. Toe drains flowing?       None seen         viii. Any seepage observed? If so, describe location, the right. See Section D below.       None observed but could not fully inspect lower portion due to thick vegetation.         Primary Spillway       i. Any visible deterioration of structure?       Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the task node to repair or replace trash frack?       A small amount of debris was observed on the trash rack of the undet structure. Make sure this is removed periodically.         iii. Is there an obvious need to repair or replace trash frack?       A small amount of debris was observed on the trash rack of the undet structure. Make sure this is moved periodically.         iii. Any noticeable problems with debris?       None observed       No water was observed teaking outside of the pipe:         iii. Dascribe any deflection or damage observed to the pipe:       No damage was observed to either outer pipe; how rave was observed?         iiii. Visible condition of outlet channel:		
iv. Erosion observed on down stream slope?       None observed but could not fully inspect lower partion due to thick vegetation.         iv. Settlement or cracks visible in slope?       None observed but could not fully inspect lower partion due to thick vegetation.         vi. Toe drains flowing?       None seen         viii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow:       None seen: significant amount of iron bacteria was present in outlet pip flow rate, and any turbidity or color within the flow: <b>Defining Spillway</b> i. Any visible deterioration of structure?       Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the left. No deterioration of either structure was observed.         ii. Is there an obvious need to repair or replace trash rack?       A small amount of debris was observed on the trash rack of the outlet structure. Make sure this is removed periodically.         iii. Is valve or gate present?       Yes, valves were present on both outlet structures. <b>E. Outlet Pipe</b> .         i. Any water visibly flowing or leaking outside of the discharge pipe?       No damage was observed teeking outside of either outlet pipe: how there was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. <b>E. Outlet Pipe</b> .         ii. Describe any deflection or damage observed to the pipe?       No damage was observed teeking outside of either outlet pipe; how there was a significant amount of iron bacteria in the botto	iv. Erosion observed on down stream slope?       None observed but could not fully inspect lower portion due to thick vegetation. If the reason left must be re-seeded to ensure erosion does not occur.         v. Settlement or cracks visible in slope?       None observed but could not fully inspect lower portion due to thick vegetation.         vii. Toe drains flowing?       None seen         viii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow:       None seen: significant amount of iron bacteria was present in outlet pip the right. See Section D below.         • Primary Spillway       i. Any visible deterioration of structure?       Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the left. No deterioration of either structure was observed.         iii. Is there an obvious need to repair or replace trash rack?       A small amount of debris was observed on the trash rack of the utet structure. Make sure this is removed periodically.         iii. Any noticeable problems with debris?       None observed         iv. Is valve or gate present?       Yes, valves were present on both outlet structure.         iii. Describe any deflection or damage observed to the pipe:       No damage was observed to either outlet pips; how there show of preversion in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.         iii. Usible condition of outlet channel:       Good condition with little to no erosion         Auxiliary (Emergency) Spillway       No emergency spillway observed	iii. Any obvious a	alterations or repairs made? None observed but could not fully inspect lower portion due to thick vegetation
areas on left must be re-seeded to ensure erosion does not occur.         v. Gettlement or cracks visible in slope?       None observed but could not fully inspect lower portion due to thick vegetation         vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow:       None seen: significant amount of iron bacteria was present in outlet pip flow rate, and any turbidity or color within the flow:         b. Primary Spillway       i. Any visible deterioration of structure?       Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the facing downstream. The 2nd outlet structure is on the left. No deterioration of either structure was observed.         ii. Is there an obvious need to repair or replace trash rack?       A small amount of debris was observed on the trash rack of the outlet structure. Make sure this is removed periodically.         iii. Any noticeable problems with debris?       None observed         iv. Is valve or gate present?       Yes, valves were present on both outlet structures.         E. Outlet Pipe	Ireas on left must be re-seeded to ensure erosion does not occur.  V. Settlement or cracks visible in slope? None observed but could not fully inspect lower portion due to thick vegetation VI. Toe drains flowing? None seen VII. Any seepage observed? If so, describe location, None seen: significant amount of iron bacteria was present in outlet pip flow rate, and any turbidity or color within the flow: the right. See Section D below.  Primary Spillway I. Any visible deterioration of structure? Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the acing downstream. The 2nd outlet structure is on the left. No deterioration of either structure was observed. II. Is there an obvious need to repair or replace trash rack? A small amount of debris was observed on the trash rack of the uttet structure. Make sure this is removed periodically. III. Any noticeable problems with debris? None observed  i. Any water visibly flowing or leaking outside of the discharge pipe? No water was observed leaking outside of either or app.  i. Any water visibly flowing or leaking outside of the on erosion  Auxiliary (Emergency) Spillway No emergency spillway observed  i. Any noticeable deterioration in the approach or discharge channel? No emergency spillway observed  i. Any noticeable deterioration in the approach or discharge channel? No emergency spillway observed  v. Any visible deterioration of structure's crest? No emergency spillway observed	iv. Erosion obser	ved on down stream slope? None observed but could not fully inspect lower portion due to thick vegetation.
v. Settlement or cracks visible in slope? <u>None observed but could not fully inspect lower portion due to thick vegetation</u> vii. Toe drains flowing? <u>None seen</u> viii. Any seepage observed? If so, describe location, <u>the right. See Section D below.</u> <b>D. Primary Spillway</b> i. Any visible deterioration of structure? <u>Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the facing downstream. The 2nd outlet structure is on the left. No deterioration of either structure was observed. ii. Is there an obvious need to repair or replace trash rack? <u>A small amount of debris was observed on the trash rack of the outlet visit is removed periodically.</u> iii. Any noticeable problems with debris? <u>None observed</u> ii. Any water visibly flowing or leaking outside of the discharge pipe? <u>No water was observed leaking outside of either outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: <u>Good condition with little to no erosion</u> <b>Auxiliary (Emergency) Spillway</b> i. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> iii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> iii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> iii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u></u></u>	v. Settlement or cracks visible in slope? <u>None observed but could not fully inspect lower portion due to thick vegetation</u> vi. Toe drains flowing? <u>None seen</u> vii. Any seepage observed? If so, describe location, <u>None seen</u> ; significant amount of iron bacteria was present in outlet pip flow rate, and any turbidity or color within the flow: <u>the right. See Section D below</u> . <b>Primary Spillway</b> i. Any visible deterioration of structure? <u>Both riser structures were evaluated as primary spillway</u> . The 1st outlet structure is on the ading downstream. The 2nd outlet structure is on the left. No deterioration of either structure was observed. ii. Is there an obvious need to repair or replace trash rack? <u>A small amount of debris was observed on the trash rack of the</u> utter structure. Make sure this is removed periodically. iii. Any noticeable problems with debris? <u>None observed</u> i. Any water visibly flowing or leaking outside of the discharge pipe? <u>No water was observed leaking outside of either outlet pipe</u> ; <u>No damage was observed to either outlet pipe; how</u> rere was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: <u>Good condition with little to no erosion</u> <b>Auxiliary (Emergency) Spillway</b> No emergency spillway observed ii. Animal activity observed? <u>No emergency spillway observed</u> ii. Animal activity observed? <u>No emergency spillway observed</u> ii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> v. Any visible deterioration of structure's crest? <u>No emergency spillway observed</u>	areas on left must be re-se	seeded to ensure erosion does not occur.
vi. Toe drains flowing?       None seen         vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow:       None seen; significant amount of iron bacteria was present in outlet pip flow rate, and any turbidity or color within the flow: <b>Definary Spillway</b> i. Any visible deterioration of structure?       Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the facing downstream. The 2nd outlet structure is on the left. No deterioration of either structure was observed.         ii. Is there an obvious need to repair or replace trash rack?       A small amount of debris was observed on the trash rack of the outlet structure. Make sure this is removed periodically.         iii. Any noticeable problems with debris?       None observed         iv. Is valve or gate present?       Yes, valves were present on both outlet structures.         E. Outlet Pipe          i. Any water visibly flowing or leaking outside of the discharge pipe?       No damage was observed to either outlet pipe; how there was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.         iii. Visible condition of outlet channel:       Good condition with little to no erosion         * Auxiliary (Emergency) Spillway       No emergency spillway observed         iii. Animal activity observed?       No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway observed<	vi. Toe drains flowing? None seen vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: Primary Spillway i. Any visible deterioration of structure? Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the left. No deterioration of either structure was observed. ii. Is there an obvious need to repair or replace trash rack? A small amount of debris was observed on the trash rack of the utlet structure. Make sure this is removed periodically. iii. Any noticeable problems with debris? None observed ii. Lescribe any deflection or damage observed to the pipe: iii. Describe any deflection or damage observed to the pipe: iii. Describe any deflection or damage observed to the pipe: iii. Describe any deflection of outlet channel: Good condition with little to no erosion Auxiliary (Emergency) Spillway i. Any noticeable obstructions to flow? No emergency spillway observed ii. Any noticeable deterioration of structure's crest? No emergency spillway observed ii. Any noticeable deterioration of structure's crest? No emergency spillway observed ii. Any visible deterioration of structure's crest? No emergency spillway observed	v. Settlement or c	cracks visible in slope? None observed but could not fully inspect lower portion due to thick vegetation
vi. Toe drains flowing? <u>None seen</u> vii. Any seepage observed? If so, describe location, <u>the right See Section D below.</u> <b>D. Primary Spillway</b> i. Any visible deterioration of structure? <u>Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the facing downstream. The 2nd outlet structure is on the left. No deterioration of either structure was observed. ii. Is there an obvious need to repair or replace trash rack? <u>A small amount of debris was observed on the trash rack of the outlet structure. Make sure this is removed periodically.</u> iii. Any noticeable problems with debris? <u>None observed</u> iv. Is valve or gate present? <u>Yes, valves were present on both outlet structures.</u> <b>E. Outlet Pipe</b> i. Any water visibly flowing or leaking outside of the discharge pipe? <u>No water was observed leaking outside of either outlet pipe; how there was a significant amount of ion bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: <u>Good condition with little to no erosion</u> <b>Auxiliary (Emergency) Spillway</b> i. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> iii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> iii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> iii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u></u></u>	vi. Toe drains flowing? <u>None seen</u> vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: <u>the right. See Section D below</u> . Primary Spillway i. Any visible deterioration of structure? <u>Both riser structures were evaluated as primary spillway</u> . The 1st outlet structure is on the acing downstream. The 2nd outlet structure is on the left. No deterioration of either structure was observed. ii. Is there an obvious need to repair or replace trash rack? <u>A small amount of debris was observed on the trash rack of the</u> uttet structure. Make sure this is removed periodically. iii. Any noticeable problems with debris? <u>None observed</u> iv. Is valve or gate present? <u>Yes, valves were present on both outlet structures.</u> <b>5. Outlet Pipe</b> 1. Any water visibly flowing or leaking outside of the discharge pipe? <u>No water was observed leaking outside of either outlet pipe</u> in Describe any deflection or damage observed to the pipe: <u>No damage was observed to either outlet pipe; how</u> nere was a significant amount of ion bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: <u>Good condition with little to no erosion</u> <b>Auxiliary (Emergency) Spillway</b> No emergency spillway observed ii. Any noticeable obstructions to flow? <u>No emergency spillway observed</u> ii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> ii. Any noticeable deterioration of structure's crest? <u>No emergency spillway observed</u> ii. Any visible deterioration of structure's crest? <u>No emergency spillway observed</u> ii. Any visible deterioration of structure's crest? <u>No emergency spillway observed</u> <b>Auxiliary (Emergency 11/2011)</b>		
vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow:       None seen; significant amount of iron bacteria was present in outlet pip from the right. See Section D below. <b>O. Primary Spillway</b> i. Any visible deterioration of structure?       Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the facing downstream. The 2nd outlet structure is on the left. No deterioration of either structure was observed.         ii. Is there an obvious need to repair or replace trash rack?       A small amount of debris was observed on the trash rack of the outlet structure. Make sure this is removed periodically.         iii. Any noticeable problems with debris?       None observed         iii. Any water visibly flowing or leaking outside of the discharge pipe?       No water was observed to either outlet pipe; how there was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, Item 5.         iii. Visible condition of outlet channel:       Good condition with little to no erosion <b>5. Auxiliary (Emergency) Spillway</b> No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway observed	vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow:   None seen: significant amount of iron bacteria was present in outlet pipe flow rate, and any turbidity or color within the flow:   Primary Spillway   i. Any visible deterioration of structure?   Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the left. No deterioration of either structure was observed.   ii. Is there an obvious need to repair or replace trash rack?   A small amount of debris was observed on the trash rack of the dutet structure. Make sure this is removed periodically.   iii. Any noticeable problems with debris?   None observed   iv. Is valve or gate present?   Yes, valves were present on both outlet structures.   iii. Describe any deflection or damage observed to the pipe:   No damage was observed leaking outside of endultion of outlet structure. See Section IV, item 5.   iii. Visible condition of outlet channel:   Good condition with little to no erosion	vi. Toe drains flow	wing? None seen
VII. Any seepage observed / IT SO, describe location, flow rate, and any turbidity or color within the flow:       None seen; significant amount of iron bacteria was present in outlet pip flow rate, and any turbidity or color within the flow:         Definary Spillway       i. Any visible deterioration of structure?       Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the left. No deterioration of either structure was observed.         ii. Is there an obvious need to repair or replace trash rack?       A small amount of debris was observed on the trash rack of the outlet structure. Make sure this is removed periodically.         iii. Any noticeable problems with debris?       None observed         iv. Is valve or gate present?       Yes, valves were present on both outlet structures.         E. Outlet Pipe       .         ii. Describe any deflection or damage observed to the pipe:       No water was observed to either outlet pipe; how there was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.         iii. Visible condition of outlet channel:       Good condition with little to no erosion         .       No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway observed         .       .       .         .       .       .         .       .       .         .       .       .	VII. Any seepage observed / If SO, describe loCation, flow rate, and any turbidity or color within the flow:       None seen: significant amount of iron bacteria was present in outlet pipe flow rate, and any turbidity or color within the flow:         Primary Spillway       i. Any visible deterioration of structure?       Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the last, No deterioration of either structure was observed.         ii. Is there an obvious need to repair or replace trash rack?       A small amount of debris was observed on the trash rack of the utlet structure. Make sure this is removed periodically.         iii. Any noticeable problems with debris?       None observed         iii. Any water visibly flowing or leaking outside of the discharge pipe?       No water was observed leaking outside of either outlet pipe: No water was observed to either outlet pipe; No damage was observed?         iii. Describe any deflection or damage observed to the pipe:       No damage was observed to either outlet pipe; No damage was observed?         iii. Observed?       No emergency spillway observed         iii. Any noticeable obstructions to flow?       No emergency spillway observed <td></td> <td></td>		
Tow rate, and any turbidity or color within the flow: the right. See Section D below. <b>D. Primary Spillway</b> i. Any visible deterioration of structure? Both riser structures were evaluated as primary spilway. The 1st outlet structure is on the facing downstream. The 2nd outlet structure is on the left. No deterioration of either structure was observed. ii. Is there an obvious need to repair or replace trash rack? A small amount of debris was observed on the trash rack of the outlet structure. Make sure this is removed periodically. iii. Any noticeable problems with debris? None observed iv. Is valve or gate present? Yes, valves were present on both outlet structures. <b>E. Outlet Pipe</b> i. Any water visibly flowing or leaking outside of the discharge pipe? No water was observed leaking outside of either outlet pipe. ii. Describe any deflection or damage observed to the pipe: No damage was observed to either outlet pipe; how there was a significant amount of ion bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: Good condition with little to no erosion <b>Condemondary (Emergency) Spillway</b> i. No emergency spillway observed iii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway observed iv. Any visible deterioration of structure's crest? No emergency spillway observed	The right is selection below. A primary Spillway i. Any visible deterioration of structure? Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the left. No deterioration of either structure was observed. ii. Is there an obvious need to repair or replace trash rack? <u>A small amount of debris was observed on the trash rack of the utlet structure. Make sure this is removed periodically.</u> iii. Any noticeable problems with debris? <u>None observed</u> iv. Is valve or gate present? <u>Yes, valves were present on both outlet structures.</u> i. Any water visibly flowing or leaking outside of the discharge pipe? <u>No water was observed leaking outside of either outlet pipe</u> ii. Any water visibly flowing or leaking outside of the outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Describe any deflection or damage observed to the pipe: <u>No damage was observed leaking outside of either outlet pipe; how there was a significant amount of ron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: <u>Good condition with little to no erosion</u> Auxiliary (Emergency) Spillway I. No emergency spillway observed ii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> ii. Any noticeable deterioration of structure's crest? <u>No emergency spillway observed</u> ii. Any noticeable deterioration of structure's crest? <u>No emergency spillway observed</u></u>	vii. Any seepage	Observed? If so, describe location, None seen; significant amount of iron bacteria was present in outlet pip
D. Primary Spillway  i. Any visible deterioration of structure? Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the facing downstream. The 2nd outlet structure is on the left. No deterioration of either structure was observed. ii. Is there an obvious need to repair or replace trash rack? A small amount of debris was observed on the trash rack of the outlet structure. Make sure this is removed periodically. iii. Any noticeable problems with debris? None observed iv. Is valve or gate present? Yes, valves were present on both outlet structures.  E. Outlet Pipe i. Any water visibly flowing or leaking outside of the discharge pipe? No water was observed to either outlet pipe: No damage was observed to either outlet pipe: Outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: Good condition with little to no erosion  C. Auxiliary (Emergency) Spillway i. No emergency spillway observed ii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway observed iii. Any visible deterioration of structure's crest? No emergency spillway observed	Primary Spillway     Any visible deterioration of structure?     Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the     acing downstream. The 2nd outlet structure is on the left. No deterioration of either structure was observed.     A small amount of debris was observed on the trash rack of the     utlet structure. Make sure this is removed periodically.     III. Any noticeable problems with debris?     None observed     None observed     No water visibly flowing or leaking outside of the discharge pipe?     No water was observed to either outlet pipe:     No damage was observed to either outlet pipe; how     rere was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.     III. Visible condition of outlet channel:     Good condition with little to no erosion     No ticeable obstructions to flow?     No emergency spillway observed     No emergency spillway observed	flow rate, and any	y turbidity or color within the flow: the right. See Section D below.
iii. Any noticeable problems with debris?       None observed         iv. Is valve or gate present?       Yes, valves were present on both outlet structures.         E. Outlet Pipe       No water visibly flowing or leaking outside of the discharge pipe?         ii. Any water visibly flowing or leaking outside of the discharge pipe?       No water was observed leaking outside of either outlet pipe.         iii. Describe any deflection or damage observed to the pipe:       No damage was observed to either outlet pipe; how there was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.         iii. Visible condition of outlet channel:       Good condition with little to no erosion         F. Auxiliary (Emergency) Spillway       No emergency spillway observed         iii. Animal activity observed?       No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway observed         iv. Any visible deterioration of structure's crest?       No emergency spillway observed	iii. Any noticeable problems with debris? <u>None observed</u> iv. Is valve or gate present? <u>Yes, valves were present on both outlet structures.</u> <b>E. Outlet Pipe</b> i. Any water visibly flowing or leaking outside of the discharge pipe? <u>No water was observed leaking outside of either c</u> ipe. ii. Describe any deflection or damage observed to the pipe: <u>No damage was observed to either outlet pipe; how</u> here was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: <u>Good condition with little to no erosion</u> <b>Auxiliary (Emergency) Spillway</b> No emergency spillway observed ii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> V. Any visible deterioration of structure's crest? <u>No emergency spillway observed</u>	outlet structure. Make sur	re this is removed periodically.
iv. Is valve or gate present?       Yes, valves were present on both outlet structures.         E. Outlet Pipe       No water vas observed leaking outside of the discharge pipe?         ii. Any water visibly flowing or leaking outside of the discharge pipe?       No water was observed leaking outside of either outlet pipe?         iii. Describe any deflection or damage observed to the pipe:       No damage was observed to either outlet pipe; how there was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.         iii. Visible condition of outlet channel:       Good condition with little to no erosion         F. Auxiliary (Emergency) Spillway       No emergency spillway observed         ii. Animal activity observed?       No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway observed         iv. Any visible deterioration of structure's crest?       No emergency spillway observed	iv. Is valve or gate present? Yes, valves were present on both outlet structures.	iii. Any noticeable	e problems with debris? None observed
E. Outlet Pipe i. Any water visibly flowing or leaking outside of the discharge pipe? No water was observed leaking outside of either oppipe. ii. Describe any deflection or damage observed to the pipe: No damage was observed to either outlet pipe; how there was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: Good condition with little to no erosion  C. Auxiliary (Emergency) Spillway No emergency spillway observed	E. Outlet Pipe i. Any water visibly flowing or leaking outside of the discharge pipe? No water was observed leaking outside of either of either of the outlet visible any deflection or damage observed to the pipe: No damage was observed to either outlet pipe; how here was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: Good condition with little to no erosion  Auxiliary (Emergency) Spillway  No emergency spillway observed  No emergency spillway obser	iv. Is valve or gat	te present? Yes, valves were present on both outlet structures.
i. Any water visibly flowing or leaking outside of the discharge pipe? No water was observed leaking outside of either oppes. No damage was observed to either outlet pipe. No damage was observed to either outlet pipe; how there was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: Good condition with little to no erosion <b>c. Auxiliary (Emergency) Spillway</b> i. Noticeable obstructions to flow? No emergency spillway observed  ii. Animal activity observed? No emergency spillway observed  iii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway observed  iv. Any visible deterioration of structure's crest? No emergency spillway observed	i. Any water visibly flowing or leaking outside of the discharge pipe?     No water was observed leaking outside of either of objee.     No damage was observed to the pipe:     No damage was observed to either outlet pipe from the 1st outlet structure. See Section IV, item 5.     iii. Visible condition of outlet channel: Good condition with little to no erosion     Auxiliary (Emergency) Spillway     No emergency spillway observed	F Outlet Pine	
iii. Describe any deflection or damage observed to the pipe:       No damage was observed to either outlet pipe; how there was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.         iii. Visible condition of outlet channel:       Good condition with little to no erosion         F. Auxiliary (Emergency) Spillway       i. No emergency spillway observed         iii. Animal activity observed?       No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway observed         iv. Any visible deterioration of structure's crest?       No emergency spillway observed	ii. Describe any deflection or damage observed to the pipe: <u>No damage was observed to either outlet pipe; how</u> here was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: <u>Good condition with little to no erosion</u> Auxiliary (Emergency) Spillway i. No emergency spillway observed  No emergency spillway observed  ii. Animal activity observed? <u>No emergency spillway observed</u> ii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> v. Any visible deterioration of structure's crest? <u>No emergency spillway observed</u> 22604 (Rey 11/2011)	i. Any water visib	bly flowing or leaking outside of the discharge pipe? No water was observed leaking outside of either
ii. Describe any deflection or damage observed to the pipe:       No damage was observed to either outlet pipe; how         there was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.         iii. Visible condition of outlet channel:       Good condition with little to no erosion         F. Auxiliary (Emergency) Spillway       No emergency spillway observed         ii. Noticeable obstructions to flow?       No emergency spillway observed         iii. Animal activity observed?       No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway observed         iv. Any visible deterioration of structure's crest?       No emergency spillway observed	ii. Describe any deflection or damage observed to the pipe: <u>No damage was observed to either outlet pipe; how</u> here was a significant amount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. iii. Visible condition of outlet channel: <u>Good condition with little to no erosion</u> Auxiliary (Emergency) Spillway i. No emergency spillway observed	nino	
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iii. Visible condition of outlet channel:       Good condition with little to no erosion         iii. Visible condition of outlet channel:       Mo emergency spillway observed         iii. Animal activity observed?       No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway observed         iv. Any visible deterioration of structure's crest?       No emergency spillway observed	iii. Visible condition of outlet channel: Good condition with little to no erosion  Auxiliary (Emergency) Spillway  No emergency spillway observed		No damage was observed to the pipe.
i. Noticeable obstruction of obtiet channel. <u>Good condition with little to no erosion</u> F. Auxiliary (Emergency) Spillway i. Noticeable obstructions to flow? <u>No emergency spillway observed</u> ii. Animal activity observed? <u>No emergency spillway observed</u> iii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> iv. Any visible deterioration of structure's crest? No emergency spillway observed	Auxiliary (Emergency) Spillway     No emergency spillway observed      No emergency spillway obse	there was a significant am	
Auxiliary (Emergency) Spillway     i. Noticeable obstructions to flow? No emergency spillway observed     ii. Animal activity observed? No emergency spillway observed     iii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway observed     iv. Any visible deterioration of structure's crest? No emergency spillway observed	Auxiliary (Emergency) Spillway     No emergency spillway observed	iii Vicible conditie	nount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.
i. Noticeable obstructions to flow?       No emergency spillway observed         ii. Animal activity observed?       No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway observed         iv. Any visible deterioration of structure's crest?       No emergency spillway observed	No emergency spillway observed         ii. Animal activity observed?         No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?         No emergency spillway observed         iv. Any visible deterioration of structure's crest?         No emergency spillway observed	iii. Visible conditio	nount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. On of outlet channel: Good condition with little to no erosion
ii. Animal activity observed? No emergency spillway observed  iii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway observed  iv. Any visible deterioration of structure's crest? No emergency spillway observed	iii. Animal activity observed?       No emergency spillway observed         iii. Any noticeable deterioration in the approach or discharge channel?       No emergency spillway observed         iv. Any visible deterioration of structure's crest?       No emergency spillway observed	iii. Visible conditio	nount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. On of outlet channel: Good condition with little to no erosion recency) Spillway
ii. Animal activity observed? No emergency spillway observed iii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway observed iv. Any visible deterioration of structure's crest? No emergency spillway observed	ii. Animal activity observed? <u>No emergency spillway observed</u> iii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u> iv. Any visible deterioration of structure's crest? <u>No emergency spillway observed</u>	iii. Visible condition F. Auxiliary (Emeri i. Noticeable obst	nount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. On of outlet channel: Good condition with little to no erosion  rgency) Spillway :ructions to flow? No emergency spillway observed
iii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway observed iv. Any visible deterioration of structure's crest? No emergency spillway observed	iii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u>	iii. Visible condition F. Auxiliary (Emer i. Noticeable obstru	nount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. On of outlet channel: Good condition with little to no erosion  rgency) Spillway ructions to flow? No emergency spillway observed
iii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway observed iv. Any visible deterioration of structure's crest? No emergency spillway observed	iii. Any noticeable deterioration in the approach or discharge channel? <u>No emergency spillway observed</u>	iii. Visible condition <b>F. Auxiliary (Emer</b> i. Noticeable obstruiture ii. Animal activiture	nount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5. On of outlet channel: Good condition with little to no erosion  rgency) Spillway ructions to flow? No emergency spillway observed  observed?
iv. Any visible deterioration of structure's crest? No emergency spillway observed	Any nonceable deterioration in the approach or discharge channel? No emergency spillway observed      No emergency spillway observed	iii. Visible condition F. Auxiliary (Emeri i. Noticeable obstr ii. Animal activity o	nount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.         on of outlet channel:       Good condition with little to no erosion         rgency) Spillway         iructions to flow?       No emergency spillway observed         observed?       No emergency spillway observed
iv. Any visible deterioration of structure's crest? No emergency spillway observed	iv. Any visible deterioration of structure's crest? No emergency spillway observed	iii. Visible condition <b>F. Auxiliary (Eme</b> rit i. Noticeable obst ii. Animal activity of iii. Animal activity of	nount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.         On of outlet channel:       Good condition with little to no erosion         rgency) Spillway         tructions to flow?       No emergency spillway observed         observed?       No emergency spillway observed
iv. Any visible deterioration of structure's crest? No emergency spillway observed	iv. Any visible deterioration of structure's crest? No emergency spillway observed	iii. Visible condition <b>F. Auxiliary (Eme</b> ric) i. Noticeable obst ii. Animal activity of iii. Any noticeable	nount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.         On of outlet channel:       Good condition with little to no erosion         rgency) Spillway       Item for the emergency spillway observed         tructions to flow?       No emergency spillway observed         observed?       No emergency spillway observed         edeterioration in the approach or discharge channel?       No emergency spillway observed
	2604 (Bey 11/2011)	iii. Visible condition <b>F. Auxiliary (Emer</b> i. Noticeable obst ii. Animal activity of iii. Any noticeable	nount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.         on of outlet channel:       Good condition with little to no erosion         rgency) Spillway         tructions to flow?       No emergency spillway observed         observed?       No emergency spillway observed         > deterioration in the approach or discharge channel?       No emergency spillway observed
		iii. Visible condition <b>Auxiliary (Emer</b> i. Noticeable obst ii. Animal activity of iii. Any noticeable iv. Any visible det	nount of iron bacteria in the bottom of the outlet pipe from the 1st outlet structure. See Section IV, item 5.   on of outlet channel:   Good condition with little to no erosion   rgency) Spillway tructions to flow? No emergency spillway observed observed? No emergency spillway observed edeterioration in the approach or discharge channel? No emergency spillway observed terioration of structure's crest? No emergency spillway observed

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

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

vi. If applicable, any visible leakage below concrete spillway? No emergency spillway observed

#### H. Downstream/Hazard Class Issues

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

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

i. Emergency Action Plan provided by owner?

No, EAP must be submitted on or before 1/2/15.

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 thick vegetation, including small trees, must be cut and removed from the area extending one-half the height of the dam beyond

the toe or 25' beyond the toe, whichever is greater. Portions of the dam could not be inspected due to the thick vegetation. The vegetation

must remain at a manageable level so that you can perform complete inspections of the dam and associated structures on a regular basis

to ensure safe operation of the dam. Once the thick vegetation has been removed, an appropriate ground cover must be established.

Grass is the ideal ground cover for a dam.

2. The larger trees (extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater) must be evaluated by

a qualified S.C. licensed professional engineer to determine if they should be removed. A tree management plan must be developed to address

the long-term plans for tree removal. Permits may be necessary for removal of the large trees; contact John Poole at 803-898-4212

to determine whether permits are necessary.

See attached sheet for additional comments.

### 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.

DHEC 2604 (Rev 11/2011)

No emergency spillway observed

# INSTRUCTIONS

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

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

# Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

# Section II (Dam Condition):

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

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

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

# Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9			
Section I (Owner's Info	Section I (Owner's Information)				
A. Dam Number: <b>D</b> <u>4516</u> 8	Hazard Class <sup>2</sup>	B. Name of Dam: Montebello Existing Dam			
C. Inspection Date $(\underline{04}/\underline{04}/\underline{20})$	1 <u>4</u> ) & Time: <u>9:20 a.m.</u>	D. Date of Last Inspection: ( <u>04/20/2011</u> )			
E. Location-County/City: Green	ville / Greenville	F. EQC Regional Office: Upstate EQC Greenville			
G. Inspector's Name: Melissa Da	wkins				
H. Owner's Name: Montebello Hor	neowners' Association				
I. Contact Person (if different	from above): Nancy McCrory				
J. Dam Owner's or Contact P	erson's Phone Numbers	: Home ()			
		Office ( <u>864</u> ) <u>232</u> - <u>5543</u>			
K. Dam Owner's or Contact P	erson's mailing address	Other ( <u>864</u> ) <u>505</u> - <u>8367</u>			
Address 1 P.O. Box 31034	Address 1 P.O. Box 31034				
Address 2 (optional)					
City <u>Greenville</u> , State <u>SC</u> Zip Code <u>29608</u>					
Section II (Dam Condition	Section II (Dam Condition)				
General Condition Assessn	ent (Select one of the	following):			
a) Satisfactory b	) Fair 🔄 c) Poor	d) Unsatisfactory e) Not Rated			
Section III (Dam Inspec	Section III (Dam Inspection Checklist)				
A. Dam Crest i. Vegetation (grass, trees we must be cut and removed. Large trees we	A. Dam Crest i. Vegetation (grass, trees weeds)? Thick vegetation, including weeds, small trees, shrubs, brush, and other deleterious vegetation, must be cut and removed Large trees were also observed. See Section IV, items 1 and 2				
ii. Animal activity observed	None observed but could not	fully inspect because of thick vegetation			
iii. Any obvious alteration or	repairs made? None obs	erved but could not fully inspect because of thick vegetation			
iv. Erosion noticed on crest	? None observed but could n	ot fully inspect because of thick vegetation			
v. Any visible settlement, mi	salignment or cracks?	None observed but could not fully inspect because of thick vegetation			
DHEC 2604 (Rev 11/2011)	DHEC 2604 (Rev 11/2011)				

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Thick vegetation, including weeds, small trees, shrubs, brush, and other deleterious vegetation, must be cut and removed. Large trees were also observed. See Section IV, items 1 and 2.

ii. Animal activity observed?	None observed but could not fully inspect because of thick vegetation
, , , , , , , , , , , , , , , , , , ,	

iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation

iv. Erosion observed on upstream slope? Could not fully inspect because of thick vegetation

v. Settlement or cracks visible in slope? Could not fully inspect because of thick vegetation

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Thick vegetation, including weeds, trees, shrubs, brush, and other deleterious vegetation, was observed. Debris had collected along the toe of the slope; it must be removed. See Section IV, items 1 and 2.

ii. Animal activity observed? Holes, possibly animal holes or old tree stumps, were observed along the toe of the slope. These must be evaluated by a qualified South Carolina licensed professional engineer to determine if they pose a threat to the dam.

iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation

iv. Erosion observed on down stream slope? Yes, bare areas were observed around the trees. Monitor these areas to ensure they do not worsen. If it does, then repairs need to be done; permits may be necessary for those repairs.

v. Settlement or cracks visible in slope? Could not fully inspect because of thick vegetation

vi. Toe drains flowing? None seen

vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow: and in the spillway channel. A plan must be developed to measure seepage (flow rate and turbidity) in these areas at least monthly. See Section IV, item 3.

#### **D.** Primary Spillway

i. Any visible deterioration of structure?	No visible deterioration of the concrete spillway was observed; however, seepage was observed
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in the spillway.

ii. Is there an obvious need to repair or replace trash rack? Not applicable

iii. Any noticeable problems with debris? Some debris was collected at the side of the spillway inlet and in the channel. A large log

was observed at the outlet. This debris must be removed and the area monitored regularly to maintain it free of debris.

iv. Is valve or gate present? No

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? Not applicable; concrete spillway is only outlet

ii. Describe any deflection or damage observed to the pipe:

iii. Visible condition of outlet channel: Good with little erosion prior to the road culvert

### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? Not applicable; concrete spillway is only outlet

ii. Animal activity observed? Not applicable; concrete spillway is only outlet

iii. Any noticeable deterioration in the approach or discharge channel? Not applicable; concrete spillway is only outlet

iv. Any visible deterioration of structure's crest? Not applicate

Not applicable; concrete spillway is only outlet

Not applicable; concrete spillway is only outlet

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

v. If applicable, any observed exposure of rebar reinforcement? Not applicable; concrete spillway is only outlet

vi. If applicable, any visible leakage below concrete spillway? Not applicable; concrete spillway is only outlet

#### H. Downstream/Hazard Class Issues

i. Any noticeable changes immediately downstream of the dam that affects the hazard classification? Yes, house at 308 Von Hollen Drive, Greenville

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

i. Emergency Action Plan provided by owner?

No, EAP must be submitted on or before 1/2/15.

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 thick vegetation must be cut and removed from the entire dam and extending one-half the height of the dam beyond the toe or 25' beyond the

toe, whichever is greater. Portions of the dam could not be inspected due to the thick vegetation. The vegetation must remain at a manageable level

so that you can perform complete inspections of the dam and associated structures on a regular basis to ensure safe operation of the dam.

Once the thick vegetation has been removed, an appropriate ground cover must be established. Grass is the ideal ground cover for a dam.

2. The larger trees (on the entire dam and extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is

greater) must be evaluated by a qualified South Carolina licensed professional engineer to determine if they should be removed.

A tree management plan must be developed to address the long-term plans for tree removal. Permits may be necessary for removal of

the large trees; contact John Poole at 803-898-4212 to determine whether permits are necessary.

3. Submit the plan to the Permitting Section in Columbia for approval (John Poole, SCDHEC Dams and Reservoir Permitting,

2600 Bull Street, Columbia, SC 29201). The seepage measurements must be recorded at least monthly, correlated to the

stage in the reservoir at the time of the measurement, and reported to the Department. Based on the measurements,

a plan to control the seepage may also be required.

### Preliminary Dam Inspection Disclaimer:

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# INSTRUCTIONS

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

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

# Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

# Section II (Dam Condition):

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

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c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

# Section IV(Conclusions):

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

DHEC PROMOTE PROTECT PROSPER	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9	
Section I (Owner's Info	rmation)		
A. Dam Number: <b>D</b> <u>4536</u> 8	Hazard Class <sup>2</sup>	B. Name of Dam: Montebello Dam E	
C. Inspection Date $(\underline{04}/\underline{04}/\underline{24})$	) <u>1</u> 4) & Time: <u>11:00 a.m.</u>	D. Date of Last Inspection: (04/20/2011_)	
E. Location-County/City: Green	ville / Greenville	F. EQC Regional Office: Upstate EQC Greenville	
G. Inspector's Name: Melissa Da	wkins		
H. Owner's Name: Montebello Ho	neowners' Association		
I. Contact Person (if different	from above): <u>Nancy McCrory</u>		
J. Dam Owner's or Contact P	erson's Phone Numbers:	Home ()	
		Office ( <u>864</u> ) <u>232</u> - <u>5543</u>	
K Dom Ownor's or Contact [	oroon'o moiling addrooo	Other ( <u>864</u> ) <u>505</u> - <u>8367</u>	
Address 1, P.O. Box 31034	erson's maning address.		
Address 2 (optional)			
City Greenville	S	tate SC Zin Code 29608 -	
Section II (Dam Condit	on)		
General Condition Assessr	nent (Select one of the f	ollowing):	
a) Satisfactory 📄 b) Fair 📄 c) Poor 🖌 d) Unsatisfactory 📄 e) Not Rated			
Section III (Dam Inspec	tion Checklist)		
A. Dam Crest i. Vegetation (grass, trees v should be reseeded and monitored to en	veeds)? Grass and weeds in g	ood condition were observed. A few bare areas were observed. These areas	
ii. Animal activity observed	None observed		
iii. Any obvious alteration or	repairs made? None obse	prved	
iv. Erosion noticed on crest	? None observed		
v. Any visible settlement, misalignment or cracks? None observed			
DHEC 2604 (Rev 11/2011)			

#### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Thick vegetation, including brush and other deleterious vegetation, must be cut and removed. Grass needs to be mowed. Portions of the dam could not be inspected due to the thick vegetation. See Section IV, item 1.

i. Animal activity observed?	None observed but could not fully inspect because of thick vegetation
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iii. Any obvious alterations or repairs made? None observed but could not fully inspect because of thick vegetation

iv. Erosion observed on upstream slope? None observed but could not fully inspect because of thick vegetation

v. Settlement or cracks visible in slope? None observed but could not fully inspect because of thick vegetation

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Grass and weeds in good condition were observed. A few bare areas were observed. These areas should be reseeded and monitored to ensure grass is established.

ii. Animal activity observed? None observed

iii. Any obvious alterations or repairs made? None observed

iv. Erosion observed on down stream slope? None observed

v. Settlement or cracks visible in slope? None observed

Yes, on the left side, the white PVC pipe was flowing and needs to be cleaned out. On the right side, the first white PVC pipe vi. Toe drains flowing? was not flowing. The second white PVC pipe (needs to be cleaned out) and two black corrugated plastic pipes were flowing.

vii. Any seepage observed? If so, describe location, None seen; significant amount of iron bacteria was present in outlet pipe on flow rate, and any turbidity or color within the flow: the left. See Section D below.

#### **D. Primary Spillway**

i. Any visible deterioration of structure? Both riser structures were evaluated as primary spillway. The 1st outlet structure is on the right

facing downstream. The 2nd outlet structure is on the left. No deterioration of either structure was observed.

ii. Is there an obvious need to repair or replace trash rack?

Yes, the trash rack was missing for the 2nd outlet structure (left);

it must be replaced immediately in accordance with the approved plans.

iii. Any noticeable problems with debris? None observed

iv. Is valve or gate present? Yes, the valve stem was observed for the 2nd outlet structure (left). No valve stem was observed for the 1st

outlet structure; however, the entire outlet structure could not be observed. The approved plans show a low-level outlet with valve stem. See Section IV, item 2.

#### E. Outlet Pipe

i. Any water visibly flowing or leaking outside of the discharge pipe? No water was observed leaking outside of either pipe but could not fully inspect because water was backed up into the pipes.

ii. Describe any deflection or damage observed to the pipe:

No damage was observed for the outlet pipe for the 1st outlet

structure (right) but could not fully inspect because water was backed up into pipe. For the 2nd outlet structure outlet pipe, see Section IV, items 3 and 4.

iii. Visible condition of outlet channel: Good condition, lined with stones. Flows directly into Montebello Pond D.

#### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? No emergency spillway was observed; however, the approved plans call for an emergency spillway on

the left side. Provide additional information about this structure. Were the calculations redone to account for it not being installed? See Section IV, item 5. ii. Animal activity observed? No emergency spillway observed

iii. Any noticeable deterioration in the approach or discharge channel? No emergency spillway observed

iv. Any visible deterioration of structure's crest? No emergency spillway observed

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

v. If applicable, any observed exposure of rebar reinforcement? No emergency spillway observed

vi. If applicable, any visible leakage below concrete spillway? No emergency spillway observed

#### H. Downstream/Hazard Class Issues

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

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

i. Emergency Action Plan provided by owner?

No, EAP must be submitted on or before 1/2/15.

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. Portions of the dam could not be inspected due to the thick vegetation. The vegetation must remain at a manageable level so that you can

perform complete inspections of the dam and associated structures on a regular basis to ensure safe operation of the dam. Once the thick

vegetation has been removed, an appropriate ground cover must be established. Grass is the ideal ground cover for a dam.

2. Provide documentation showing that the valve stem is in place or provide documentation showing that it was repaired.

3. Damage to the 2nd outlet structure outlet pipe (on left) was noted in the previous inspection (4/20/11). Some of this damage near the

end of the pipe had been corrected; however, the pipe was not fully restored to its original diameter. Provide revised flow calculations for

this pipe to ensure that its capacity is unchanged. Also, see item 4; inspection of the pipe for damage is required.

See attached sheet for additional comments.

# Preliminary Dam Inspection Disclaimer:

The information contained in the preliminary inspection report is intended as an aid to identify those dams that require maintenance and/or repair actions to reduce their danger to human life or property only. It is not intended as professional engineering or consulting advice for conditions or situations present at individual dams. It is not a substitute for a detailed inspection, nor does it replace the need for services provided by registered professional engineers. If your dam is experiencing an unusual situation consult with engineering professionals to find an appropriate remedy. Preliminary inspections conducted by South Carolina Department of Health and Environmental Control (the Department) are provided "AS IS" and "as available", without warranties of any kind, either express or implied. Preliminary inspections consist only of a visual but technical examination of the dam and its appurtenant works. All findings are based solely on visual observations of the inspector at the time of the inspection. Common law holds that the storage of water is a hazardous activity and the Department does not assume any responsibility or risk for your actions or inactions. Dam owners are responsible for the safe operations and maintenance of their impoundment structures.
# Preliminary Inspection Report for South Carolina Regulated Dams and Impoundment Structures Regulations – DHEC 2604 R.72-1 through R.72-9

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

## DHEC 2604 (Rev. 11/2011)

b) FAIR- No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

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

DHEC PROMOTE PROTECT PROSPER	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: <b>D</b> <u>2207</u> 8	Hazard Class <sup>2</sup>	B. Name of Dam: Holiday Lake Resort						
C. Inspection Date ( <u>05/14/20</u>	14_) & Time: 1315	D. Date of Last Inspection: ( <u>12 / 28 / 2011 _</u> )						
E. Location-County/City: Green	ville / Marietta	F. EQC Regional Office: Upstate Greenville eqc						
G. Inspector's Name: John Cobb	G. Inspector's Name: John Cobb							
H. Owner's Name: Greenville Cou	nty Recreation District							
I. Contact Person (if different	from above): Don Shuman							
J. Dam Owner's or Contact P	erson's Phone Numbers	: Home ()						
		Office ( <u>864</u> ) <u>676</u> - <u>2180</u>						
K. Dam Owner's or Contact F Address 1 4806 Old Spartanbu	erson's mailing address	Other ( <u>864</u> ) <u>561</u> - <u>9645</u>						
Address 2 (optional)								
City <u>Taylors</u>	, (	State <u>SC</u> Zip Code <u>29687</u>						
General Condition Assess	on) ent (Select one of the	following):						
a) Satisfactory	a) Satisfactory b) Fair c) Poor d) Unsatisfactory e) Not Rated							
Section III (Dam Inspec	tion Checklist)							
<b>A. Dam Crest</b> i. Vegetation (grass, trees v	veeds)? need to cut grass							
ii. Animal activity observed	no							
iii. Any obvious alteration or	repairs made? <u>no</u>							
iv. Erosion noticed on crest	? <u>no</u>							
v. Any visible settlement, m	v. Any visible settlement, misalignment or cracks? no							
DHEC 2604 (Rev 11/2011)								

	egetation (grass, trees weeds)? need to cut the brush
ii. A	nimal activity observed? could not observe due to thick vegetation
iii. A	ny obvious alterations or repairs made? <u>no</u>
v. E	rosion observed on upstream slope? could not inspect du to thick vegetation
v. Se	ttlement or cracks visible in slope? could not inspect due to thick vegetation
<b>Do</b> . Ve	wn Stream Slope egetation (grass, trees weeds)? grass and weeds need to be cut
i. A	nimal activity observed? yes
ii. A	ny obvious alterations or repairs made? <u>no</u>
v. E	rosion observed on down stream slope? yes- around outlet pipe
v. Se	ttlement or cracks visible in slope? yes
vi. To	pe drains flowing?n/a
. <b>Pri</b> . An	mary Spillway y visible deterioration of structure? siphon system
. <b>Pri</b> i. An i. Is	mary Spillway         y visible deterioration of structure?
. <b>Pri</b> . An i. Is ii. A	mary Spillway         y visible deterioration of structure?
i. An i. Is ii. Is	mary Spillway         y visible deterioration of structure?
. <b>Pri</b> i. . An i. Is ii. Ai v. Is . <b>O</b> u . An	mary Spillway         y visible deterioration of structure?
. <b>Pr</b> ii . An i. Is ii. Ai v. Is . <b>O</b> u . An	mary Spillway
. <b>Pri</b> i i. An ii. Is ii. An i. <b>O</b> u i. An ii. De	mary Spillway
. <b>Pri</b> i. . An i. Is ii. An v. Is . <b>Ou</b> ii. De ii. Vi	mary Spillway y visible deterioration of structure?
. Prin . An i. Is ii. An v. Is . Ou . An ii. De iii. Vi . Not	nare, and any turbulty of color within the now.
. <b>Pri</b> i. An i. An ii. Is iv. Is iv. Is . <b>Ou</b> . An ii. An ii. An	marker, and any torbulity of color within the now.

<b>F. Auxiliary (Emergency) Spillway continued</b> v. If applicable, any observed exposure of rebar	reinforcement? <u>n/a</u>
vi. If applicable, any visible leakage below concr	ete spillway? n/a
H. Downstream/Hazard Class Issues i. Any noticeable changes immediately downstre	am of the dam that affects the hazard classification?
Camp is currently closed. However, if camp is reopened	the classification will need to be changed to a Class 1.
I. Emergency Action Plan (EAP)	
i. Emergency Action Plan provided by owner?	sent a copy to owner to fill out

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:

Seepage is very heavy midway down dam and getting worse as it approaches the outlet structure

Some areas of settling on downstream slope

trees in groin of dam (both sides)

Culvert may restrict flow of emergency spillway

Grass/weeds/brush need to be cut on the dam

Develop plan to measure seepage (flow rate, turbidity and stage in reservoir) and submit to John Poole (SCDHEC-BOW)

## Preliminary Dam Inspection Disclaimer:

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DHEC 2604 (Rev 11/2011)

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

## INSTRUCTIONS

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

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D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

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## DHEC 2604 (Rev. 11/2011)

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e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

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



Catherine B. Templeton, Director Promoting and protecting the health of the public and the environment

January 10, 2013

Northbrook Carolina Hydro LLC Attn: Glenn Beaumont 14550 N Frank Lloyd Wright # 210 Scottsdale, AZ 85260

RE: Inspection of Holidays Lake Dam D-4470 Greenville County

Dear Mr. Beaumont:

On December 7, 2012, I conducted a routine visual inspection of the Holidays Lake Dam. A copy of my inspection report is attached. During the inspection some items of concern were noted and were discussed with onsite representative Kevin Grogan and are outlined in this letter.

Below is a discussion of the items of concern noted during the inspection:

- There is seepage at the tow of the slope of the channel the leads to the power generator house. Please monitor this area and take necessary action as needed.
- There is seepage at the concrete structure across from the power generator house.
- There is animal activity along the channel leading to the power generator house
- The flashboards are leaking.

During the inspection Mr. Grogan informed the writer that the flashboards would be replaced within the year. Please contact John Poole with the Bureau of Water- Dams and Reservoirs Program for obtaining all appropriate permits. Mr. Poole can be contacted at 803-898-4212.

Enclosed are two copies of a Dams and Reservoirs Emergency Notification Plan. Please complete the forms, retain a copy for your use, and return the other copy to this office to be placed in your dam's file. The agencies listed on your copy of the Emergency Alert Notification Plan can provide service in the case of an emergency and should all be notified immediately should a dam failure be imminent.

Provisions to the S.C. Dams and Reservoirs Safety Act require the owner to notify the Department within 30 days of transferring title or the control of his dam to some one else. Please notify our office should control of your dam be transferred.

Also, a copy of the field inspection report is enclosed for your record. Please feel free to call me with any questions or concerns. As a Class 2 Dam, the next scheduled inspection for this dam will be performed in December 2015.

Sincerely,

John Cobb

Environmental Manager Greenville EQC Office

cc: John Poole, Bureau of Water

### SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

Region 2

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channel leading to power house



crest of dam and debris on flashboards



channel leading to power house



impoundment



down stream



channel leading to power house



animal activity in channel



animal activity in channel



seepage at toe of channel



seepage at toe of channel



seepage at concrete structure



flashboards and downstream slope of dam



Catherine B. Templeton, Director Promoting and protecting the health of the public and the environment

July 1, 2013

Mr. Samuel W. Crowe The Reserve at Lake Keowee 641 Pine Grove Church Rd Sunset, SC 29685

RE: Inspection of Keowee River Club Dam D-4548 Pickens County

Dear Mr. Crowe:

On March 8, 2013, I conducted a routine visual inspection of the Keowee River Club Dam. A copy of my inspection report is attached, along with pictures of items observed.

Below is a discussion of the major item of concern noted during the inspection:

• Upstream embankment needs to be reseeded to prevent further erosion.

Return all documentation required by this letter to SCDHECô Upstate Region EQC, Greenville, 200 University Ridge, Greenville, SC 29601.

A copy of the Emergency Action Plan was provided to you during the inspection. Please complete the EAP, retain a copy for your use, and return the other copy to this office to be placed in your damøs file. The agencies listed on your copy of the Emergency Alert Notification Plan can provide service in the case of an emergency and should all be notified immediately should a dam failure be imminent.

Provisions to the S.C. Dams and Reservoirs Safety Act require the owner to notify the Department within 30 days of transferring title or the control of his dam to someone else. Please notify our office should control of your dam be transferred.

Please feel free to call me with any questions or concerns. As a Class 2 Dam, the next routine inspection for this dam is scheduled to be performed during or before March 8, 2016.

If you have any questions, please contact me at 864-241-1090.

Sincerely,

Melissa M. Dawkins, P.E. Regional Engineer Upstate EQC Regionô Greenville Office

cc: John Poole, P.E.ô Bureau of Water



Upstream slope



Upstream slope- needing to be stabilized







Downstream slope



Spillway outlet



Downstream slope



Downstream slope



Catherine B. Templeton, Director Promoting and protecting the health of the public and the environment Certified 7009 2250 0001 0099 2554

August 6, 2014

Mr. Rick Burris Executive Director YMCA Camp Greenville 601 E. McBee Avenue, Suite 212 Greenville, SC 29601

RE: Inspection of Lake Sudy Dam D-2826 Greenville County

Dear Mr. Burris:

On April 11, 2014, I conducted a routine visual inspection of the Lake Sudy Dam. A copy of my inspection report is attached, along with pictures of items observed. <u>A detailed inspection, as defined in S.C. Reg. 72-1, by a qualified South</u> Carolina licensed professional engineer is required. Documentation of this inspection must be submitted to the Department on or before October 6, 2014 unless a repair permit from the Department has been issued.

- A boat shed has been constructed on the dam.
- Large trees and thick underbrush are on the downstream slope of the dam. A qualified South Carolina licensed professional engineer must inspect these areas.
- Seepage was visible below the dam. Also, flowing seeps on each side of the outlet pipe were noticed, toe drains could not be located in the areas of the seeps.
- There were signs of animal burrows on the dam.

A blank copy of the EAP was provided to you during the inspection. Please complete the form, retain a copy for your use, and return the other copy to this office to be placed in your damøs file. The agencies listed on your copy of the Emergency Alert Notification Plan can provide service in the case of an emergency and should all be notified immediately should a dam failure be imminent.

Rick Burris informed the writer that a permit has been submitted to SCDHEC in Columbia for repairs to be made on the dam. Just a reminder, no construction can begin until approval from SCDHEC has been granted.

Provisions to the S.C. Dams and Reservoirs Safety Act require the owner to notify the Department within 30 days of transferring title or the control of his dam to someone else. Please notify our office should control of your dam be transferred.

Also, a copy of the field inspection report is enclosed for your record. Please feel free to call me with any questions or concerns. As a Class 2 Dam, the next scheduled inspection for this dam will be performed in April 2017.

Sincerely,

# cc: John Poole, Bureau of Water



Trash rack w/ debris

Large concrete pipe for emergency spillway



Trees on dam

Boat shed constructed on dam



Channel being formed by emergency spillway

Seepage area



Large trees on dam

Seepage area



Seepage area

Outlet pipe



Burrow



Trees and thick underbrush on dam



Catherine B. Templeton, Director Promoting and protecting the health of the public and the environment CERTIFIED 7009 2250 0001 0102 9631

July1, 2013

Mr. Ross Stewart Pickens County Soil and Water Conservation District P.O. Box 245 Pickens, SC 29671

RE: Inspection of Twelve Mile WCD Dam 6 D-3981 Pickens County

Dear Mr. Stewart:

On April 10, 2013, I conducted a routine visual inspection of the Twelve Mile WCD Dam 6. A copy of my inspection report is attached, along with pictures of items observed. A response as to how the items noted in this letter and corresponding inspection report and the previous inspection report are being addressed is required to be submitted to the Department on or before September 1, 2013.

Below is a discussion of the major items of concern noted during the inspection:

- Vegetation needs to be mowed/cut on the Dam
- Animal activity was observed throughout the dam and possible animal burrows at the toe of the dam
- Seepage areas on both the right and left side of the Dam
- An area has sloughed off
- Tree roots along the toe of the Dam

Return all documentation required by this letter to SCDHECô Upstate Region EQC, Greenville, 200 University Ridge, Greenville, SC 29601.

Enclosed are two copies of a Dams and Reservoirs Emergency Notification Plan. Please complete the forms, retain a copy for your use, and return the other copy to this office to be placed in your damøs file. The agencies listed on your copy of the Emergency Alert Notification Plan can provide service in the case of an emergency and should all be notified immediately should a dam failure be imminent.

Provisions to the S.C. Dams and Reservoirs Safety Act require the owner to notify the Department within 30 days of transferring title or the control of his dam to someone else. Please notify our office should control of your dam be transferred.

Please feel free to call me with any questions or concerns. As a Class 2 Dam, the next routine inspection for this dam is scheduled to be performed during or before April 10, 2016.

If you have any questions, please contact me at 864-241-1090.

Sincerely,

John C Cobb Environmental Manager

# Upstate EQC Regionô Greenville Office

cc: John Poole, P.E.ô Bureau of Water



Emergency spillway



Downstream slope of dam- thick vegetation



Animal trail on downstream slope of dam



Roots on toe of dam



Seepage area at the toe of the dam



Toe drain and main outlet pipe







Crest of dam w/ vegetation needing to be cut



Upstream slope of dam



Upstream slope of dam



Upstream slope of dam



Outlet structure



Downstream slope of dam



Possible animal activity/burrow



Roots at toe of dam



Outlet pipe



Toe drain with Iron bacteria

## D-2901 Stonebrook Farm Subdivision Dam Section IV Additional Comments

3. Large trees were observed near the toe and along the groins. The larger trees (on the entire dam and extending one-half the height of the dam beyond the toe or 25' beyond the toe, whichever is greater) must be evaluated by a qualified South Carolina licensed professional engineer to determine if they should be removed. A tree management plan must be developed to address the long-term plans for tree removal. Permits may be necessary for removal of the large trees; contact John Poole at 803-898-4212 to determine whether permits are necessary.

4. These areas of seepage should be monitored regularly to ensure that the water does not become flowing and turbid. This would indicate a very serious situation and the Department should be notified immediately.

5. Deep holes were observed along both sides of the right siphon (near the spillway). This siphon must be evaluated by a qualified SC licensed professional engineer to determine whether it can be repaired or grouted or whether it must be removed to prevent a potential piping pathway. Permits will be necessary for the repair or removal. A permit application for the repairs must be submitted to the Department on or before 4/8/15.

6. This area must be drained to allow for complete inspection by a qualified SC licensed professional engineer to determine whether the riprap is appropriately placed and what repairs are needed to prevent further erosion of the banks.

## D-2841: Swan Lake Section IV Additional Comments (4-28-15)

3. Significant undercutting was observed where a large tree fell to the left of the primary spillway. This area must be evaluated by a qualified S.C. licensed professional engineer to determine whether the structural stability of the dam is affected and what repairs are necessary to stabilize this area. Was the entire rootball removed when the tree was removed? Follow the engineer's recommendations for repair of this area to prevent further erosion. Contact David Graves at 803-898-4398 to determine whether permits are necessary for the repairs in this area.

4. Portions of the dam could not be inspected due to the thick vegetation. The vegetation must remain at a manageable level so that you can perform complete inspections of the dam and associated structures on a regular basis to ensure safe operation of the dam. Once the thick vegetation has been removed, an appropriate ground cover must be established. Grass is the ideal ground cover for a dam.

5. A decaying stump was observed in the middle of the downstream slope to the right of the outlet structure, and a fallen tree with a partially removed rootball was observed on the left side of the downstream slope. Also, dead/ dying trees (diameter >4") were observed on the downstream slope. All of these stumps and rootballs must be removed and holes filled and compacted. This work would require permits from the Dams Permitting Section in Columbia (David Graves, Manager; 803-898-4398).

6. Some bare areas were observed. Monitor these areas and re-seed as necessary.

7. Permits may be necessary for repair of this erosion if more than just minor surface filling and compaction is done; contact David Graves at 803-898-4398 to determine whether permits are necessary.

8. The seepage needs to be evaluated by a qualified SC licensed professional engineer to determine if structures need to be added to safely convey these flows through the dam. A plan must be developed to measure seepage (flow rate and turbidity) in these areas at least monthly. Submit the plan to the Permitting Section in Columbia for approval (David Graves, SCDHEC Dams and Reservoir Permitting, 2600 Bull Street, Columbia, SC 29201). The seepage measurements must be recorded at least monthly, correlated to the stage in the reservoir at the time of the measurement, and reported to the Department. Based on the measurements, a plan to control the seepage may also be required.

9. Undercutting (1-2') of the concrete outlet structure/ pipe was observed on the right side. This area must be evaluated by a qualified S.C. licensed professional engineer to determine what repairs are necessary to stabilize this area. Follow the engineer's recommendations for repair of this area to prevent further erosion. Contact David Graves at 803-898-4398 to determine whether permits are necessary for the repairs in this area.

D H E C PROMOTE PROTECT PROSPER	Preliminary Regulated	Inspection Report for South Carolina Dams and Impoundment Structures Regulations R.72-1 through R.72-9					
Section I (Owner's Information)							
A. Dam Number: <b>D</b> <u>2878</u> &	Hazard Class <sup>2</sup>	B. Name of Dam: Lake Trollingwood					
C. Inspection Date ( <u>12/10</u> /20	<u>13</u> ) & Time: <u>1:00 p.m.</u>	D. Date of Last Inspection: ( <u>11/19/2011</u> )					
E. Location-County/City: Green	lle / Pelzer	F. EQC Regional Office: Upstate EQC Greenville					
G. Inspector's Name: Melissa Dar	G. Inspector's Name: Melissa Dawkins						
H. Owner's Name: Lake Trollingwo	od Inc.						
I. Contact Person (if different	I. Contact Person (if different from above): Doug Stazer, Keith Mayfield						
J. Dam Owner's or Contact Pe	rson's Phone Numbers	Home ( <u>864-2</u> 43-9090 (Keith)					
		Office ( <u>864-243-2868 (Doug)</u>					
K. Dam Owner's or Contact P Address 1 207 Rivendell Drive	erson's mailing address:	Other ()					
Address 2 (optional)							
	, ~						
Section II (Dam Condition)         General Condition Assessment (Select one of the following):         a) Satisfactory       b) Fair         • Deor       d) Unsatisfactory         • Not Rated         Section III (Dam Inspection Checklist)         A. Dam Crest         i. Vegetation (grass, trees weeds)?							
in the area where the work on the outlet s ii. Animal activity observed?	ucture and pipe occurred. Monitor	r these and reseed as necessary.					
iii. Any obvious alteration or	repairs made? None obs	erved					
iv. Erosion noticed on crest	Some bare areas, see item	A.i above					
v. Any visible settlement, mi	alignment or cracks? _	None observed					
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## Section III (Dam Inspection Checklist) continued

### **B. Upstream Slope**

i. Vegetation (grass, trees weeds)? Weeds need to be cut. Woody vegetation needs to be cut and removed.

ii. Animal activity observed? None observed but could not fully inspect due to thick vegetation.

iii. Any obvious alterations or repairs made? None observed but could not fully inspect due to thick vegetation.

iv. Erosion observed on upstream slope? There were a few bare areas, primarily in the area where the work on the outlet structure and pipe occurred. Monitor these and reseed as necessary.

v. Settlement or cracks visible in slope? None observed but could not fully inspect due to thick vegetation.

#### C. Down Stream Slope

i. Vegetation (grass, trees weeds)? Weeds and grass need to be cut. In the areas where the new outlet structure was placed, bare areas were observed. Monitor and reseed as necessary to maintain complete cover. See Section IV, item 1.

ii. Animal activity observed? None observed but could not fully inspect due to thick vegetation.

iii. Any obvious alterations or repairs made? None observed but could not fully inspect due to thick vegetation.

iv. Erosion observed on down stream slope? There were a few bare areas; see item C.i above.

v. Settlement or cracks visible in slope? None observed but could not fully inspect due to thick vegetation.

vi. Toe drains flowing? The toe drains were under water and could not be observed.

 vii. Any seepage observed? If so, describe location, flow rate, and any turbidity or color within the flow:
 Yes, a large wet area (100'x100' triangle) was observed in the plateau area approximately 50' to the right of the outlet pipe, along with a small cave-in where it flows into the main channel, to the right of the outlet pipe. A smaller area to the left of the pipe was also observed. See Section IV, item 2.

#### **D. Primary Spillway**

i. Any visible deterioration of structure? None observed

ii. Is there an obvious need to repair or replace trash rack?

iii. Any noticeable problems with debris? A small amount of debris was observed around the outlet structure, but the trash rack

No

None observed

appears to be functioning properly.

iv. Is valve or gate present? Unknown

#### **E. Outlet Pipe**

i. Any water visibly flowing or leaking outside of the discharge pipe? None observed

ii. Describe any deflection or damage observed to the pipe:

iii. Visible condition of outlet channel: Good with little to no erosion observed

### F. Auxiliary (Emergency) Spillway

i. Noticeable obstructions to flow? None observed; however, weeds need to be cut and woody vegetation needs to be cut and removed.

ii. Animal activity observed? None observed

iii. Any noticeable deterioration in the approach or discharge channel? None observed but could not fully inspect due to thick vegetation.

iv. Any visible deterioration of structure's crest? None

None observed

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F. Auxiliary	(Emergency)	Spillway	continued
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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 observed from the crest

### I. Emergency Action Plan (EAP)

i. Emergency Action Plan provided by owner?

No. EAP must be submitted on or before 9/29/14.

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 vegetation must remain at a manageable level so that you can perform complete inspections of the dam and associated structures

on a regular basis to ensure safe operation of the dam.

2. Even though heavy rains occurred 2 days before the inspection, hydrophilic vegetation was observed in the areas of possible

seepage, which indicates that the water was not just a result of the recent rainfall. If the areas are determined to be seepage, then a plan

must be developed to measure seepage (flow rate and turbidity) in this area at least monthly. Submit the plan to the Permitting Section in

Columbia for approval (John Poole, SCDHEC Dams and Reservoir Permitting, 2600 Bull Street, Columbia, SC 29201). The seepage

measurements must be recorded at least monthly and should be correlated to the stage in the reservoir at the time of the measurement.

## 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.

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

## INSTRUCTIONS

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

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

## Section I (Owner's Information):

A) Dam Number; Enter the Dam's inventory number.

B) Name of Dam; Enter the common name of dam found within EFIS.

C) Inspection Month & Time; Enter the day, month, year, and time in which the inspections was performed.

D) Date of Last Inspection; Enter the day, month, and year, in which the last inspection was performed.

E) Location-County/City; Enter the county and city, if applicable, where the dam is located.

F) EQC Regional Office; Enter the DHEC EQC Regional office that covers the area in which the dam is located.

G) Inspector's Name: Enter the name of the person performing the inspection.

H) Owner's Name: Enter the name of the person owning the dam. If there is multiple owners list them and their contact information in the "General comments and recommendations are in section IV.

I) Contact Person; Enter the name of the person that represents the dam owner during the inspection. This person should be authorized to remedy any deficiencies found by the inspector.

J) Dam Owner's or Contact Person's Phone Numbers; Enter the home, office, and other available numbers for the Dam owner or Contact person.

K) Dam Owner's or Contact Person's mailing address; Enter the dam owner's or contact person's mailing address including city state and zip code.

## Section II (Dam Condition):

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

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

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b) FAIR- No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.

c) POOR- A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.

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

e) NOT RATED- This should only be used if it is not possible to assess to dam's condition due to site constraints on visibility on the day of inspection. If vegetation is a problem the owner should be ordered perform maintenance to remove it before the next visit.

# Section III (Dam Inspection Checklist):

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

## Section IV(Conclusions):

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

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