



**Town of Lake Lure
Interagency Informational Meeting**

Date: 3/14/19 from 3:30-4:30 PM

Location: Lake Lure Town Hall, 2948 Memorial Highway

Moderator: Shannon Baldwin

Recorder: Laura Krejci

I. Background:

- A sizeable, unstable slope area has been identified in Rumbling Bald Resort. This area has been assessed by the Town of Lake Lure Emergency Management Team, the North Carolina Department of Transportation and the North Carolina Department of Environmental Quality.
- This event is impacting several properties and a section of Buffalo Creek Road, which is State Road 1314.
- This area has been identified as an active landslide event.
- Property owners within the impacted slope area were notified in writing and were invited to an Interagency Informational Meeting on 3/14/19 at the Town of Lake Lure Municipal Hall at 2948 Memorial Highway at 3:30 PM.
- The Town of Lake Lure organized this Interagency Information Meeting and invited officials from Rutherford County, North Carolina Department of Transportation, North Carolina Department of Environmental Quality, and Duke Energy Corporation.

II. Purpose of the Meeting: The purpose of the meeting was to provide information to proximate property owners related to the landslide event from officials from the Town of Lake Lure, Rutherford County, North Carolina Department of Transportation, North Carolina Department of Environmental Quality, and Duke Energy Corporation.

III. Welcome & Meeting Overview: Shannon Baldwin, Lake Lure Town Manager welcomed everyone to the meeting and thanked them for their attendance. He advised that the landslide was beyond the authority and resources of the Town of Lake Lure since it was occurring on private property and impacting a state roadway. He explained that the plan for the meeting was to facilitate communication with agency officials and property owners regarding the landslide. There were approximately 30 people in attendance for the meeting.

IV. Introductions: The following panelists were introduced.

Town of Lake Lure

- Dustin Waycaster, Fire Chief/Emergency Management Coordinator

Rutherford County

- Shane Dotson, Building Inspector
- Frankie Hamrick, Fire Marshall/Emergency Management Director
- John Greenway, Assistance Fire Marshall

North Carolina Department of Transportation (NCDOT)

- Jody Kuhne, P.G., P.E, Regional Geological Engineer
- Tim Anderson, P.E., Division Maintenance Engineer, District 13
- Matt Taylor, P.E., County Maintenance Engineer

North Carolina Department of Environmental Quality

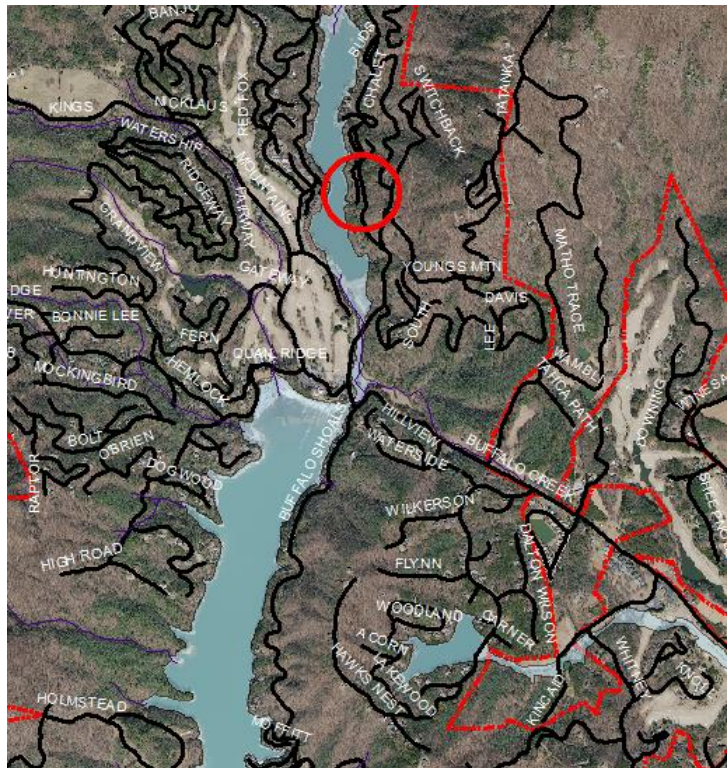
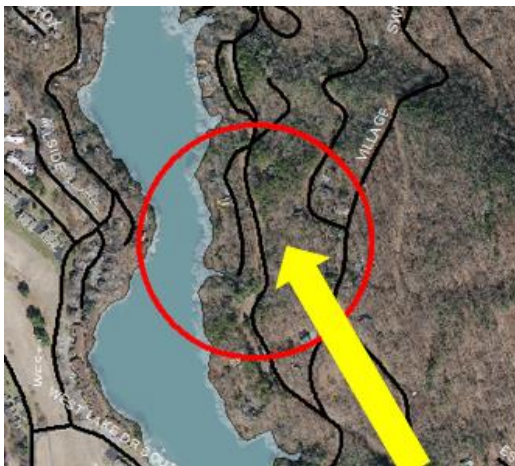
- Rick Wooten, P.G., Senior Geologist for Geohazards and Engineering Geology, Asheville Regional Office of the *North Carolina Geological Survey, Division of Energy, Minerals, and Land Resources*

Duke Energy Corporation

- Dan Harris, Distribution Engineer
- Danny Painter, Engineer

V. Informational Slide Presentations: Dustin Waycaster provided general information regarding the Landslide located approximately at the 1600 block of Buffalo Creek Road, as shown below.

- The red circle in the picture on the left illustrates the impacted area at this time.
- Everything inside the red dotted line in the picture on the right illustrates the land within the Town of Lake Lure.
- The area is adjacent to Bald Mountain Lake.



What do we know about the landslide? Dustin Waycaster invited **Rick Wooten, P.G., Senior Geologist for Geohazards and Engineering Geology** to provide information on a more detailed map included below. He advised that he had visited the area twice thus far and summarized his findings as follows:

- The length of the slide is 600 feet from east to west.
- The widest part is below Buffalo Creek Road and is about 330 feet wide.
- The slide is about 3 acres.
- The depth is about 45-50 feet deep.
- There are three homes that have been condemned thus far.
- To put this in perspective, he noted that this slide occurred previously in prehistoric times.
- It began sliding again in January 2019.

- He explained that on a positive note, what we are seeing is a rate of movement in terms of inches per day. Some of the more damaging slides move much faster than this and that is where we have seen a loss of life.
- He stated that we are mapping out the area of the slide and those areas that could be affected by the movement. It is difficult to predict how this will proceed. We are just beginning the process at this point.



Map showing the approximate area of active slide movement as of 2014/03/14. Topographic contours (20 foot contour interval) derived from a 20-foot pixel resolution LiDAR (Light Detecting And Ranging) digital elevation model. LiDAR data acquisition pre-dates recent slide movement. Parcel boundaries courtesy of the Rutherford County GIS Department. Map base is 2015 orthophotography. Data Sources: North Carolina Geological Survey and North Carolina Dept. of Transportation. Note: All locations and boundaries are approximate. Areas of ground cracks within the active slide area are not shown. This map is not a substitute for a map prepared by a licensed land surveyor.

Dustin Waycaster advised that the Health Department has also been notified of the situation and about the homes that had been condemned. He invited Jody Kuhne, Regional Geological Engineer with NCDOT to come forward to share additional information.

Jody Kuhne presented two maps included in the hyperlinks below:

[Buffalo Creek Road Geo Slide](#)
[NC DOT Scenarios](#)

- Jody explained that worked for NCDOT's Technical Services Division as an Internal Consultant.
- He stated that in 1974 a report was issued to the Rumbling Bald Home Owners Association regarding a landslide in the same area before the road was put within the State system. He noted that one home that was impacted at this time was relocated following this event.
- He added that in 1980 NCDOT issued a report that noted that the lake was built in 1962.

- He stated that the lake keeps the landslide wet and supports the continued movement of the slide. "This isn't one big scoop of a landslide. As the toe scoots out the smaller part scoot out."
- He explained that NCDOT can't practically rebuild this area. You may have seen similar situations in other areas and we have rebuilt an embankment to secure the slide. We cannot do this here.
- We have to look at the possibility of rerouting the road.
- If we were going to try to fix the road, as we climb the mountain we are getting shallower within the mountain.
- There is a very low profile for a slide and we can't put masses of rock in place to stabilize the situation.
- The slide is impacted by the record rainfall last year.
- As a reference, in rural Rutherford County it would cost about \$750K /mile to build a state road.
- The double lines in the map illustrate what would happen if we excavated at the top of the slide and fill it back in with rock and estimated the cost for this work but he does not believe this option would work.
- Another option would be to build a gigantic wall and estimated the cost for this option which would have tie backs well into the mountain. Permanent easement for NCDOT.
- This highway got put on the State system because of a political decision initially. And what can happen with it next will be a political decision as well.
- It is worth it for your community to get together and look at all of the options.
- As it is right now, there is a private road that anyone can use.

VI. Questions and Answers

- 1) **Could you bridge this...over the landslide?**

Answer from Jody Kuhne: Will need to investigate this option.

- 2) **With all the costs involved does FEMA get involved?**

Answer from Jody Kuhne: It has not been determined yet. They work on a case by case bases.

- 3) **You recommended that our community come together to recommend solutions – Does NCDOT organize these efforts?**

Answer from Jody Kuhne: No, NC DOT takes action based on guidance from internal leadership.

Additional Information from Tim Anderson, Division Maintenance Engineer NCDOT: We typically would do a public hearing to address this issue. First, this is a DOT right of way. As you can see, the area we can't drain because of the lake. We could bridge it but the land is still moving so this is not an option. The issue is, no matter what we do, the land is still moving. This situation is now beyond NCDOT parameters. The slide is still active. We need further conversations to determine how best to proceed.

- 1) Active slide and 2) We need to determine if this is a FEMA type event, then we can worry about tying the road back.

- 4) **In the 70s when the previous slide occurred, the lake was down about 15 feet and the land on the other side of the lake actually spit. Is this happening at this time? Answer from Jody Kuhne:** No.

- We focus on the road and related property.
- The one area that no one owns is a house on is the lake bed and we could build a road there.
- For DOT purposes, we focus on what will support getting the road back through the area.

5) **Is it the responsibility of the home owner to do testing?**

Answer from Jody Kuhne: Recommend you get a geo tech report.

Additional information from Rick Wooten: In terms of the geo testing we have limited resources but we are doing mapping now to measure and estimate the homes that may be impacted. If you want specific information, you may want to hire a consultant. Our focus now is helping everyone understand the scope and magnitude of the problem.

6) **What testing was done?**

Answer from Jody Kuhne: We tested the one in the center of the road and on each side.

7) **It appears that this is spreading to the right and narrowing. Is there an inference you can take from this?**

Answer from Jody Kuhne: I am not necessarily able to reach higher ground as an option. Immediate impact is illustrated by the red dotted line, but the area could grow since it is still active.

8) **At the current rate, how much time do we have?**

Answer from Jody Kuhne: It is too early for us to make this determination. We are continuing to learn information that impacts our projections. The rain is a major determinant but you could get a hazard assessment.

9) **How did Duke Energy get involved?**

Answer provided by Dustin Waycaster: We contact them as those houses that were condemned had actual service lines going into the structures were breaking away from the structure. We didn't want to continue to pull on the feeder lines and we need them to come and assess the situation.

Further information provided by Dan Harris, Duke Energy Corporations, Distribution Engineer

- As far as Duke, we are in a reactionary state and we are still gaining information.
- We follow the DOT right of way although we are on private property.
- Our focus is keeping everyone energized and we are assessing to determine if we have to find alternative solutions.
- We depend on the property owners.
- The main feeder line runs through Buffalo Creek Road.
- Meters were pulled from the condemned homes.
- Because the feeder line goes through the impacted area we will find out exactly what DOT is going to do.
- Duke usually follows the road way and they depend on the property owners to help us out.

10) **If the road is rebuilt will the lines be placed about ground or would they be buried?**

Answer provided by Dan Harris: It would be a futile effort to put the lines underground at this point but since the solution is undetermined we cannot say what will take place at this point.

11) **Can you provide parcel numbers to property owners?**

Answer provided by Dustin Waycaster: The Town of Lake Lure can provide parcel numbers so you can look up your property in the GIS system.

12) **What is the timeline for the next step?**

Answer provided by Dustin Waycaster: Landslide is unpredictable and it is continues to move. The investigation and assessment is ongoing. This is a preliminary meeting but we will stay in touch with everyone and keep you posted with any next steps.

13) Can the landslide be stopped?

Answer provided by Rick Wooten: For this to stop we need to have an extended dry spell. You are not alone in this situation there are some slides as large as 15 acres in NC. It's a difficult time for many people,

Additional information provided by Jody Kuhne: Even if the option to drain the lake was to be put into place, this is short of NCDOT scope. It's not going to be cheap and to get the amount of land needed to resolve the issue it would involve private property. The best we can do at this point is to understand the slide better and in the meantime you can speak with your elected officials.

14) When did this slide happen?

Answer provided by Dustin Waycaster: The first slide was May of 2018 and it was repaired. On January 2nd 2019, NC DOT was notified of another incident.

15) Would you recommend lowering the lake?

Answer provided by Jody Kuhne: NCDOT's focus is the roadway and that decision would be made by Rumbling Bald Resort. While we want to be a partner in this, the scope goes beyond the right of way. DOT focus is the road way and this is an active slide involving multiple private properties. Can't envision DOT installing a wall in the lake.

16) If Lake Lure is not our permanent address, how can we stay informed?

Answer provided by Dustin Waycaster: This would be a perfect opportunity for you to sign up for our Everbridge Notification System and this will allow us to send you any updates electronically. Be sure your name is on the sign-up sheet and we will follow up with you about this. You can select the method of notification you prefer.

17) Estimate about how long it will take for the slide to stabilize?

Answer provided by Jody Kuhne: There is not a way to estimate this because we do not know what the weather will provide, but we will continue to monitor and assess the situation,

VII. Next steps: Shannon Baldwin stating that the Town of Lake Lure will be contacting State elected officials/counterparts. He advised that the Mayor was out of Town but as soon as he returned they would be making these calls. He reiterated that this situation involves private property and State right of way, but the Town of Lake Lure will do all we can to support an information exchange with those who have the authority to find a resolution.

Rick Wooten added that any information you request is public information so anything you request will be provided.

Shannon Baldwin closed the meeting by stating that the Town of Lake Lure will continue to serve as a facilitator for future meetings and information sharing.

V. Adjournment: The meeting adjourned at approximately 4:22 PM.

- Please click [here](#) for a live streamed recording of the meeting.