

November 14, 2021

Secretary of Transportation
1501 Mail Service Center
Raleigh NC 27699-1501

Attn: Mr. J. Eric Boyette
North Carolina Secretary of Transportation

Sent via email to: jeboyette@ncdot.gov

Re: Compromised existing infrastructure in flood prone areas of Barnardsville, NC

Dear Mr. Boyette,

My name is Eddie Harwood, and I am a native and lifelong resident of Barnardsville, N.C., and an extremely concerned citizen. I am writing to you today to request much needed and URGENT attention to an issue that has been a major problem for many years and whose direness is escalating daily. That issue is the compromised infrastructure located in the flood prone areas of Barnardsville, N.C. As each significant rainfall event leads to yet another round of flood conditions, damaged property, businesses lost and lives put into danger, the flood management devices put into place by the State of North Carolina continue to either fail, be severely compromised, or in many cases have their maintenance completely ignored, further compounding the next event. As a result, the State of North Carolina has demonstrably failed our citizens through years of promises, much verbal/written action and many unfulfilled promises that have ultimately fallen short of real action through bureaucratic fumbling. I have attached a quasi-report with as many details as I can muster for your review and consideration of my desperate plea to you for immediate action on behalf of our community.

Over the last four years I have communicated the issues at hand to dozens of authorities at the local, regional and state level, ALL of whom have explicitly concluded (and made actual written statements included here) declaring these issues to be of SEVERE importance. While each of these individuals have at times been very engaged and helpful (of which we are very appreciative) the end result is zero progress toward short or long term solutions. We need your help to push the resolution of these issues over the goal line of action and solution, and we need that action today, not tomorrow.

Year after year, storm after storm, our small town is suffering, and the impacts are much greater than just buildings or roads. Our citizens lives are being impacted when their homes are washed away, businesses shut down, bridges our school buses travel over are crumbling, and the financial impacts are catastrophic to many people in an impoverish area, who already cannot afford yet another blow to their wallets. I believe the State of North Carolina has drifted from an entity who can assist in the positive resolution of these issues, to a series of complacent and negligent departments and agencies offering nothing more than lip service. The attached document clearly demonstrates that help is NOT on the way, and any movement of the needle is a mere optical illusion. Based upon a construction cost estimate provided by an engineer in 2019, it seems readily apparent that the State would rather spend millions on disaster relief funding after the damage has been done, rather than to spend a single dollar on solutions or even the preventative maintenance of the infrastructure itself. Inaction is in fact an action. To date, the State of North Carolina's (lack of) actions clearly demonstrates that kicking this can

down the road is a preferred method of handling the health, safety and welfare of our citizens.

As of today, the can has been kicked down the road and has reached your doorstep and we ask that you use your authority and power to do the right thing and resolve the absolutely poor state of infrastructure in Barnardsville, North Carolina. While there are many areas in our town that need to be addressed, the documentation included here focuses only on one area at our main town intersection of NC Hwy 197 (Barnardsville Highway) and Paint Fork Road where those roads intersect Dillingham Creek and the forks of Ivy Creek.

I thank you for your time and consideration and encourage you to utilize this document as a resource, and contact any or all of the individuals previously involved with the issues. Some of the individuals listen may no longer be in office, but please do not let this prevent you from making headway into helping us. Also, should you like to discuss this further, please do not hesitate to contact me directly at 828-768-3874.

Sincerely,

A handwritten signature in blue ink, appearing to read 'E. Harwood', with a stylized flourish at the end.

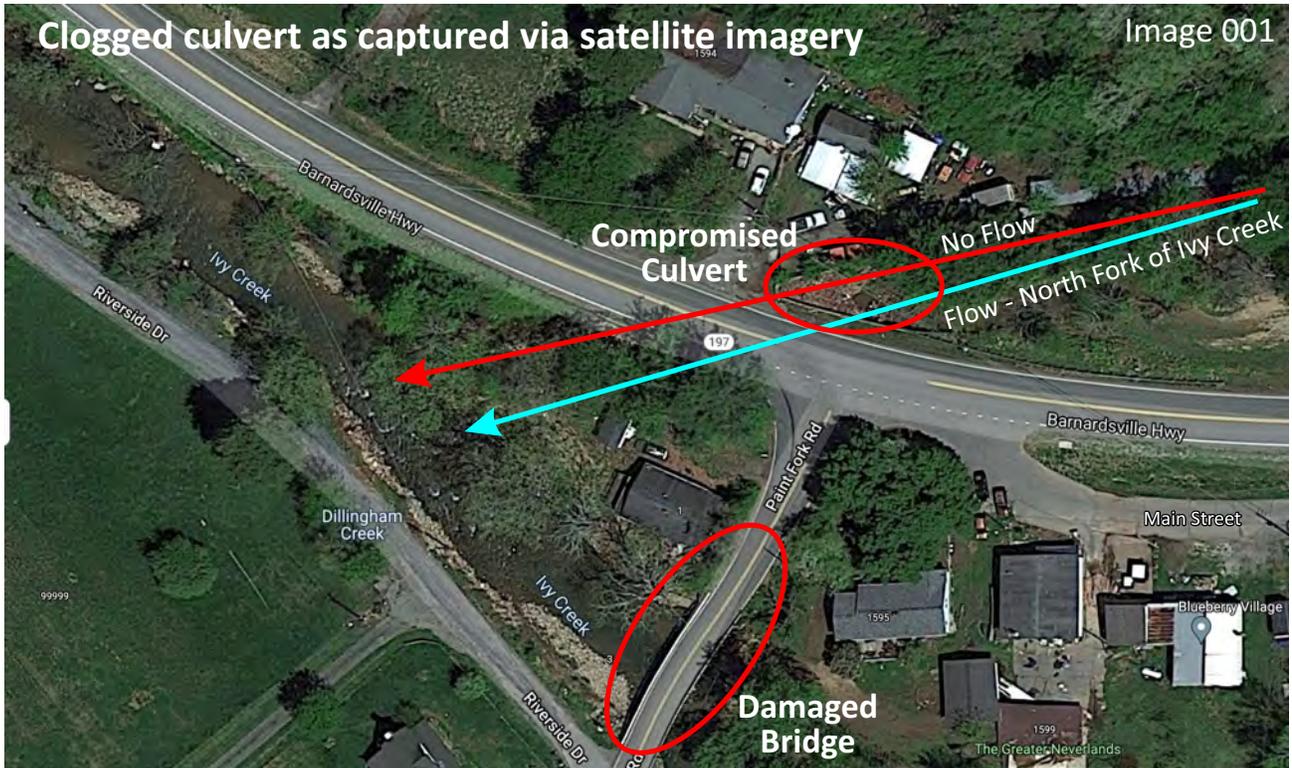
Edward Harwood

cc: Rep. Brendan Jones, Chair, Transportation Committee

enclosure

Compromised Existing Infrastructure in Flood Prone Areas of Barnardsville, NC

November 14, 2021



Brief Historical Background of the Area

Barnardsville, NC, located in Western North Carolina in Buncombe County, is a small, remote town which has a long history of flooding. While I am not attempting to present an exhaustive list of events, suffice to say there have been significant flooding events almost every year over the last decade with several major events since 2013. Many NC governing bodies are aware of and have been engaged in these flooding events and the aftermath of them. Citizens and business owners have sustained significant damage year after year as a direct result. Over many decades these agencies have installed bridges and culverts and other measures to address the floods in many locations in and around Barnardsville. Many of these devices are currently severely compromised structurally or simply not properly maintained and as a result, clogged with debris, thereby preventing proper flood management. In fact, in some cases the impacts are so severe that the flow of water has changed, and thereby also changed the areas which become flooded. One of the most problematic areas is located in the center of town very near the U.S. Post Office, the local elementary school, and the largest industrial plant in the area. Here, a culvert and bridge are located at the intersection of NC Hwy. 197 and Paint Fork Road (refer to satellite image above) as they intersect Dillingham Creek, Ivy Creek and the forks of Ivy Creek. As you can see, the culvert has been compromised for so long that even Google Maps satellite imagery has captured the built up debris.

Background of the Issue

As a result of the compromised culvert in this location the natural flow of water has been redirected, erosion has increased and bedload sediment/rock/gravel has been transported to new and unexpected places (and this is just to name a few of the resulting issues). Ultimately, this means that when an actual flood occurs, the areas that become flooded can change, greatly impacting more and more lives and businesses. The impacts are so severe that often repairs to their properties and homes are not possible and then entire families and businesses must relocate permanently. This is a feat that almost all parties are financially unable to accomplish without incurring catastrophic financial injury.



Image 002

View from South side of NC Hwy 197 looking North

This has occurred time and time again, and has been documented by local residents, news agencies and government agencies for many years. Since 2018, I have made a personal effort to address the issues in this area by contacting every authority within my power and have successfully carried on discussions with nearly 3 dozen people, yet to date, no significant solution has been achieved. I have in my possession, email communications discussing these issues and have included those emails in this document. In the Spring and Summer of 2019, through many meetings and written promises, it appeared that a solution was not only possible, but actually in the works. However, that action also became inaction, and these efforts and communications eventually ceased with no results. In 2021, the impacts of flooding were once again unleashed onto the citizens of this area due to Hurricane Fred and yet today, the compromised infrastructure remains.

Here are some photographs of the issues taken at various times over recent years which illustrates how frequently the compromised culvert experiences flooding.



2016 Flood Event

Compromised Culvert

North side of NC Hwy 197

Image 004

11/14/2021



2018 Flood Event

Image 003

Compromised Culvert

North side of NC Hwy 197

Current Status of the Compromised Structures

As of November 12, 2021, the Paint Fork Road bridge is showing signs of possible structural integrity issues and the culvert in discussion remains clogged with debris with approximately 60-80% blockage. Below are photographs taken on Friday, November 12, 2021.



Image 007

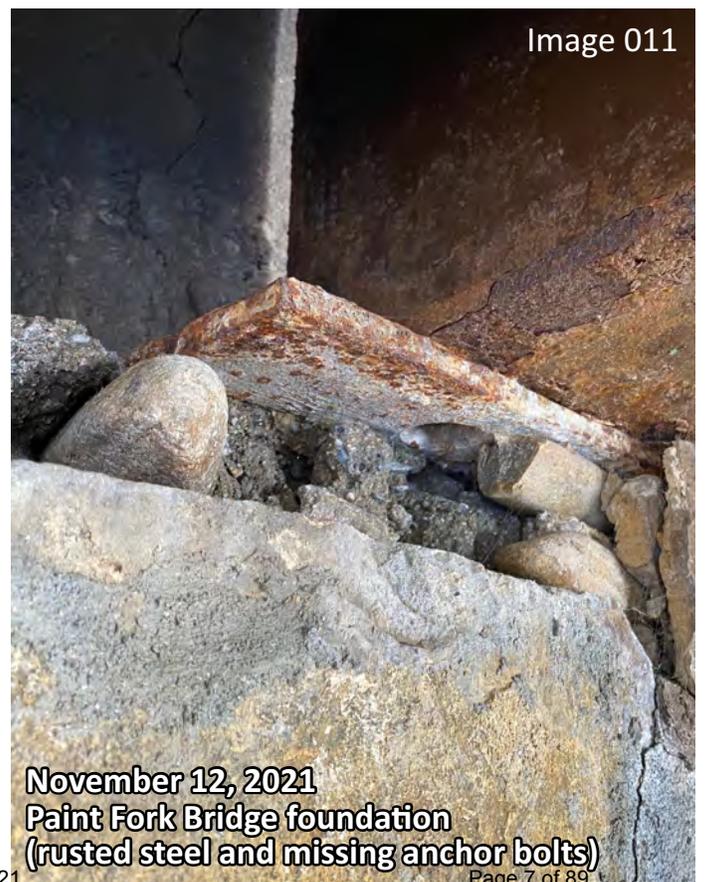


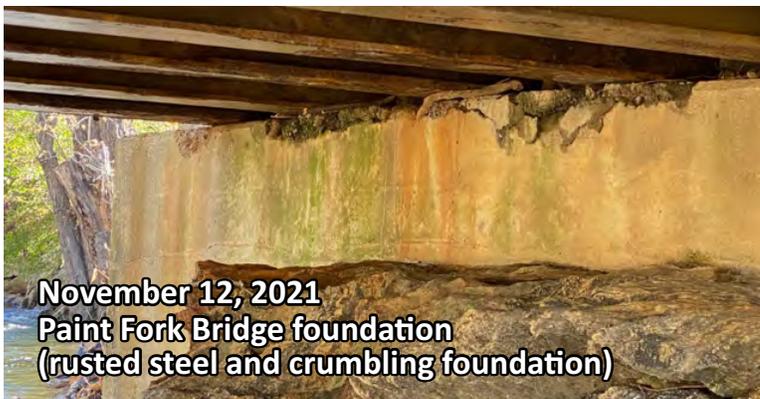
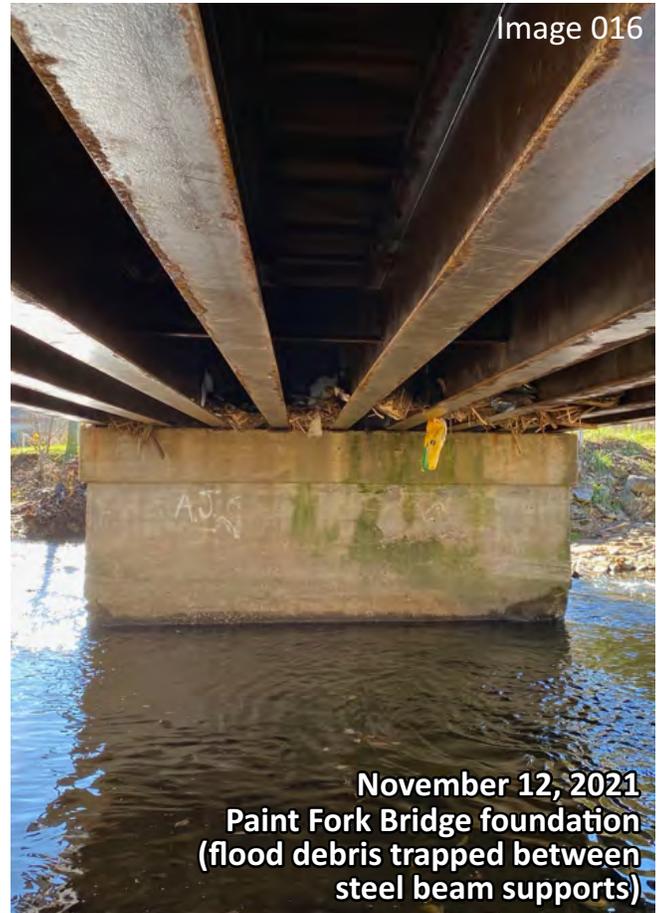
Image 008



URGENT REQUEST FOR ASSISTANCE: Compromised Existing Infrastructure in Flood Prone Areas of Barnardsville, NC

Additionally, the bridge along Paint Fork Road which passes over Ivy Creek also seems to be deteriorating as seen in the photos below. This bridge is traversed each and every day by school buses carrying children to Barnardsville Elementary, local farm vehicles and full size semi-trucks as they transport goods to the areas largest industrial plant (Ohio Electric). For this traffic, this is the only means of accessing much of this area of Barnardsville. The bridge footings were built upon rock, which at some areas is crumbling, its steel beams are rusty, and some of the steel beams have missing anchor bolts and/or steel mounting plates. The underside of the bridge is littered with flood debris trapped between its steel support beams as well.





Communication Timeline

The following chronological recounting of email communications within which I was involved, is intended to give you a semi-detailed accounting of the involvement of the many (but not all) individuals who attempted to assist in pushing a remediation project through the various processes and governing agencies so as to aid Barnardsville, specifically in the NC Hwy 197 / Paint Fork Road bridge area (Ivy Creek/Dillingham Creek). Here is a list of the individuals and agencies which were involved. *Note that not all individuals were involved in all communications, but I have also included PDF copies of these emails at the end of the document for your review and use.*

Terry Van Duyn - *NC State Senator*

John Ager – *NC State General Assembly Representative*

Amanda Fuemmeler – *United States Army Corp. of Engineers*

Scott Jones - *United States Army Corp. of Engineers*

Lee Lilly – *N.C. Governor's Office*

Zan (George) Price – *N.C. Dept. of Environmental Quality*

John Lucey – *Legislative Liaison, N.C. Dept. of Environmental Quality*

Stan Aiken – *N.C. Division of Energy, Minerals, and Land Resources*

Dan Brubaker – *N.C. Dept. of Public Services*

Terry Fox - *N.C. Dept. of Public Services*

Mike Fryar – *Buncombe County Commissioner*

Nathan Pennington – *Director, Buncombe County Planning and Development*

Cynthia Fox-Clark - *Planner III, Buncombe County Planning and Development*

Anthony Dowdle – *Buncombe County Soil and Water Conservation District*

Gary Higgins – *Director, Buncombe County Soil and Water Conservation District*

Jim Holland – *Buncombe County Assistant Manager*

Jerry VeHaun - *Director, Buncombe County Emergency Services*

Jessica Hocz - *Mountain Valleys Resource Conservation and Development Council*

Greg Jennings, P.E. - *Jennings Environmental, PLLC*

Jeff Foster

Timeline:

April 19, 2019 – a severe flooding event occurred in Barnardsville, NC.

April 19, 2019 – I contact N.C. Representative John Ager. He informed that he had contacted Amanda Fuemmeler, who suggested involving Anthony Dowdle.

April 26, 2019 – Rep. Ager reaches out to Sen Van Duyn. Sen. Van Duyn states she had contacted Jim Holland, as well as Lee Lilly. Mr. Lilly suggested we request an appropriation as part of the Governor's statewide river management efforts which was to be included in the Governor's hurricane relief funding request at that time.

May 15, 2019 – Gary Higgins and Zan Price meet at the Paint Fork Bridge to discuss the project.

May 30, 2019 - Gary Higgins, engages professional engineer Greg Jennings. Jennings responds the same day and included in this email is Jessica Hocz.

June 3, 2019 – Gary Higgins writes to me to let me know that he has engaged Cynthia Fox-Clark, Scott Jones and Zan Price, as well as the USDA Natural Resources Conservation Service. He also states: “At this point, it looks like the project is very possible. We just need to find ways to come up with a short-term plan to get the debris removed from the stream and then look at a long-term solution for flooding of that area.” Funding challenges are also mentioned.

June 4, 2019 – Zan Price responds to Higgins email stating “Additionally, since these waters are classified trout, you might need a trout buffer waiver from the Division of Energy, Minerals, and Land Resources (DEMLR) depending on the scope of the work. Stan Aiken is the local contact for trout buffer waivers.”

June 7, 2019 – Engineer Jennings, Gary Higgins and Jessica Hocz meet at Paint Fork Road bridge to discuss the issues. Engineer Jennings follows up with all parties with a brief five point outline of long term solutions.

June 9, 2019 – a severe storm passes through the Barnardsville area, causing more flooding.

June 9, 2019 – I email Zan Price, Cynthia Fox, Scott Jones, Amanda Fuemmeler, Jessica Hocz, Jim Holland and Stan Aiken with photography of local flooding due to the storm, once again with a plea for help.

June 10, 2019 – Gary Higgins acknowledges the Jennings June 7th email, and suggests that the gravel debris in the culvert be removed soon, pending funding. He also acknowledges the validity of Jennings’ suggestions for the long term.

June 10, 2019 - Scott Jones replies to my email and states: “Corps is prepared to expedite any permit request to address the issues in Barnardsville once it is received. It is my understanding that Mr. Higgins is coordinating with multiple stakeholder groups to develop a plan to address the issues and determine a funding / oversight strategy for the project. Once that design plan is developed, the Corps will review as quickly as possible in order to facilitate any necessary authorization(s).”

June 10, 2019 – Gary Higgins emails Rep. Ager and Sen. Van Duyn to provide updates as well as a \$60-70,000 cost estimate just to remove gravel debris from the culverts. He declares that there is no local funding to assist with this project and also stated that BCSWCD “strongly recommended additional funding and resources be used to conduct an engineering study to evaluate long-term solutions to the flooding issue in this area as well. This is essential to help insure that properties in this area have additional protection from floodwaters in the future.” He also acknowledges that “woody debris” has recently been removed from the culvert.

June 11, 2019 – Rep. Ager replies to Higgins and Sen Van Duyn and states: “I spoke with the governor's legislative assistant, and he was fully aware of this situation and we are going to see if there is some North Carolina Department of Environmental Quality money that can be accessed.

June 11, 2019 – Cynthia Fox-Clark initiates an email regarding this issue, stating that she had once again visited the site. Her email endeavors to define all the permitting requirements needed to move forward with this project so the scope of work can more accurately reflect what is needed. She also states: “hopefully debris removal will remediate most of the immediate flooding from the most frequent rainfall events.”

This email is copied to me, Scott Jones, Stan Aiken, Nathan Pennington, Jessica Hocz, Jim Holland, Dan Brubaker, Terry Fox, Gary Higgins, Amanda Fuemmeler and Zan Price.

June 22, 2019 – Engineer Jennings engages Jessica Hocz and Gary Higgins with a recommended concept plan for channel realignment, boulder cross-vanes, and setback levee on the right bank. Objectives are to eliminate bank erosion, transport bedload sediment through the reach to pass under the bridge, reduce flood potential to homes on right bank, and improve stream habitats. I do not have a copy of the document which is referenced in the email (the concept plan).

June 24, 2019 – I email Sen. Van Duyn to inform her that yet again, more flooding has occurred in Barnardsville that weekend and request a status update. Sen Van Duyn acknowledges the email and states she will follow up soon.

At this point Rep. Ager, Senator Van Duyn, Amanda Fuemmeler, Cynthia Fox-Clark, Jessica Hocz, Zan Price, Jerry VeHaun and Jeff Foster were included in the email communications.

July 2, 2019

Gary Higgins acknowledges the Jennings concept plan document and mentions a preliminary \$300,000 cost estimate (\$240,000 in construction and \$60,000 in engineering fees). (This was increased in later emails by an additional \$20,000 to cover FEMA requirements of the CLOMR and LOMR for the channel work).

July 2, 2019 – Gary Higgins contacts Sen. Van Duyn to discuss and advocate for the Jennings' Conceptual plan and remarks: “Implementation of this plan might be worth some serious consideration since the cost seems pretty reasonable for the scope of the project and two separate projects could be avoided.” Higgins also acknowledges that funding is being sought.

July 3, 2019 – Zan Price replies to Engineer Jennings to acknowledge his conceptual plan with positive remarks.

July 30, 2019 – I email Sen. Van Duyn to get a status update. Sen Van Duyn replies stating she will investigate the status.

August 6, 2019 – John Lucey emails Sen. Van Duyn to inform her that NCDEQ does not have any funding available to assist with this project. He recommends that Buncombe County apply for funding from the U.S. Dept. of Agriculture. Gary Higgins informed John Lucey that Buncombe County did apply for USDA-EWP (Emergency Watershed Program) grant funding but did not qualify. Higgins also informed Lucey that Buncombe County applied for a USDA PL-566 (the Watershed Protection and Flood Prevention Act) grant and was awaiting word. This funding would address a more long term fix for the area in discussion.

August 6, 2019 – Sen. Van Duyn emails me to let me know that she intends to contact Buncombe County Commissioner Mike Fryar to see if he would call Sen. Burr and Sen. Tillis to ask for a letter of support for the USDA PL-566 grant program.

August 7, 2019 – Gary Higgins replies to Engineer Jennings to let thank him for his help and that he will let him know as things progress with this project.

While there are many, many more emails in addition to the above, as well as more recent communications, this is the end of my personal email archive of the project. As stated many times above, the project has never materialized, and the issues, as well as flooding risks remain imminent for the people of Barnardsville, NC.

Future Risk to the citizens of Barnardsville, NC - a true liability for everyone involved

It does not take a long, nor laborious effort to clearly see proof that this area of Barnardsville will see severe flooding again, and likely very, very soon. Dozens of experts and authoritative figures seem to unanimously agree that these structures are not only compromised, but in severe need of mitigation and/or repair yet somehow, the funding required to move forward with a long term solution to relieve the citizens of Barnardsville from imminent and catastrophic harm to their property and possibly their lives continues to be denied or ignored.

I researched Barnardsville Elementary School, located less than 1,000 feet from the area in discussion, as a target property for risk of flooding. Using data obtained from the floodfactor.com website, we can ascertain that this school is at a 97% risk of receiving ONE FOOT of flood water to its building within the next 15 years. Additionally, the building is listed as a category 9 (out of 10) risk factor or also labeled as an EXTREME risk. I believe this risk is significantly increased over and above this data due to the compromised infrastructure detailed in this document.

As already demonstrated, this issue is far greater than Buncombe County can possibly fund, and so we are left to wait on funding from a higher source. The State of North Carolina can assist us with this funding either directly or with influence on federal sources.



EXTREME Flood Factor
20 Hillcrest Dr, Buncombe County, North Carolina
FEMA Zone (est.): X Flood Insurance: recommended

Flood risk is increasing for this property.

This property has an **Extreme Flood Factor®**, and its risk of flooding is increasing as weather patterns change.

Likelihood of **12 in** flood water to this building within **15 years**



Within the next 15 years, this property has a 97% chance of 12 inches of flood water reaching the building at least once.

FloodFactor 20 Hillcrest Dr, Buncombe County, North Carolina

Home About Methodology Environmental Changes Historic Solutions Help Center

Map View: Overall Risk

Filter by levels:

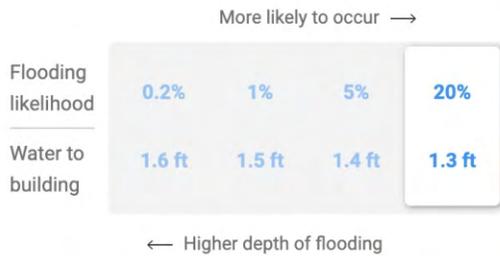
- All
- Minimal
- Major
- Minor
- Severe
- Moderate
- Extreme

Minimal Minor Moderate Major Severe Extreme

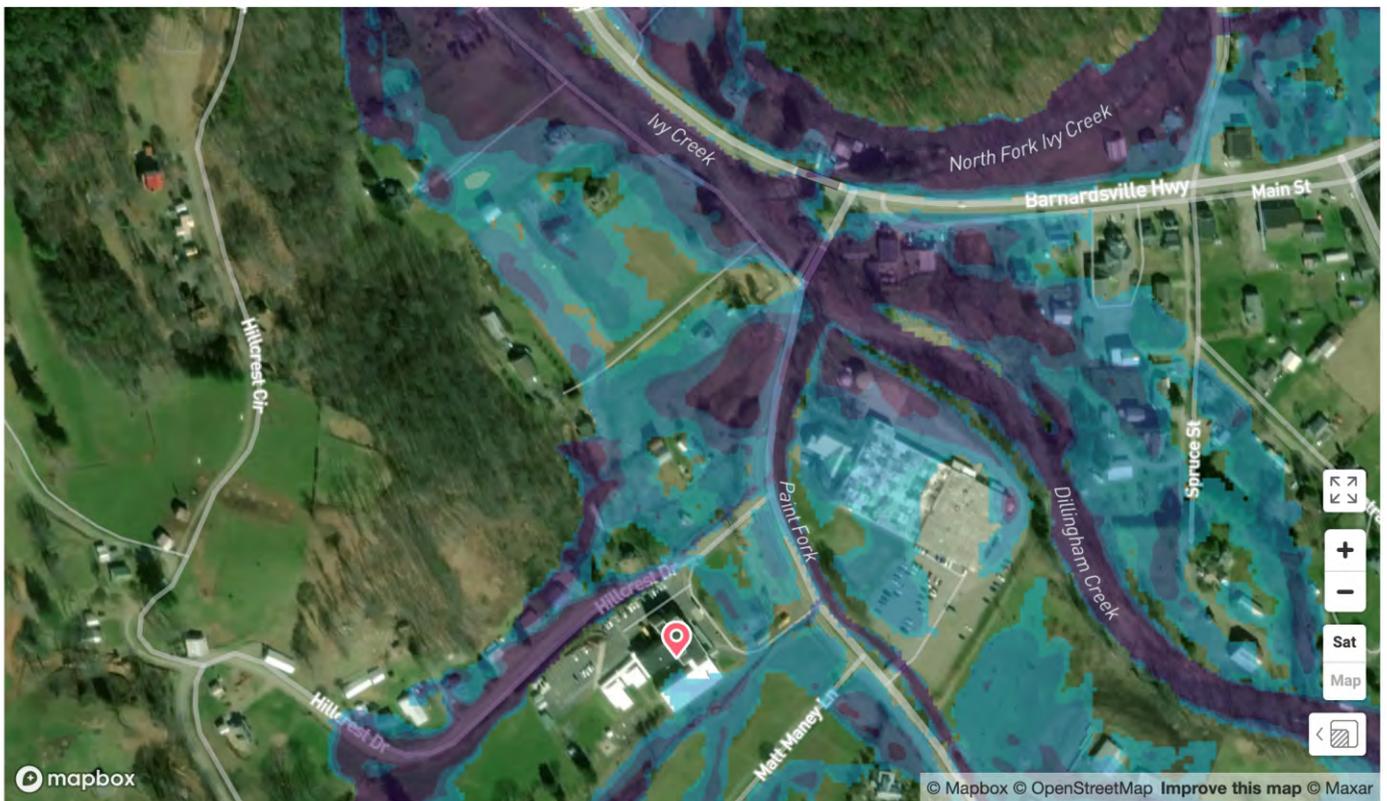
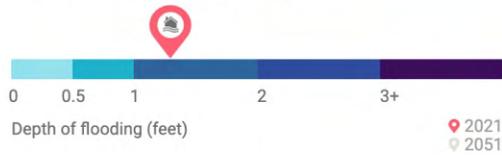
Summary
Community Risk
Flood Depth Explained
Flood Risk Explorer
Environmental Changes
Personal Solutions
Area Risk Overview

Mapbox © OpenStreetMap Improve this map

This has always been true, yet has also been left unresolved. Why? It seems that with such a severe and extreme risk, doing nothing leaves the State and every other agency that controls the process for remedying this problem fully at risk and with liability of all possible outcomes. I believe this is a case of an “ounce of prevention is worth a pound of cure” and certainly worth any amount in lieu of the possible loss of life.



In 2021, it is **20%** likely that **1.3 ft** of water will reach the largest building on this property.



In closing, I believe that you, the North Carolina Secretary of Transportation, have the ability to correct the currently ill-fated course of this project and in your hands you hold a plethora of information that will allow you to make the right decision so that the citizens of Barnardsville can be protected from future harm.

We hope that you use your authority and power to make this project a reality today, not tomorrow.

Thank you for your time and consideration.

Edward Harwood

Supporting Email Communications

(not organized in chronological order)

From: Cynthia Fox-Clark Cynthia.Fox-Clark@buncombecounty.org

Subject: RE: Barnardsville creek restoration concept plan

Date: July 3, 2019 at 7:52 AM

To: Greg Jennings greg@jenningsenv.com

Cc: Angela Ledford angela.ledford@buncombecounty.org, Edward Harwood erharwood@yahoo.com, Fuemmeler, Amanda J CIV (US) Amanda.Jones@usace.army.mil, Gary Higgins Gary.Higgins@buncombecounty.org, Jeff Foster jrfosterjr@yahoo.com, Jerry Vehaun Jerry.Vehaun@buncombecounty.org, Jessica Hocz (jessica.hocz@mountainvalleysrkd.org) jessica.hocz@mountainvalleysrkd.org, John Ager jagerhng@gmail.com, Nathan L. Pennington Nathan.Pennington@buncombecounty.org, Price, Zan (George) Zan.Price@ncdenr.gov, Terry.VanDuyn@ncleg.net

CF

Thank you!

From: Greg Jennings <greg@jenningsenv.com>

Sent: Tuesday, July 02, 2019 2:03 PM

To: Cynthia Fox-Clark <Cynthia.Fox-Clark@buncombecounty.org>

Cc: Angela Ledford <angela.ledford@buncombecounty.org>; Edward Harwood <erharwood@yahoo.com>; Fuemmeler, Amanda J CIV (US) <Amanda.Jones@usace.army.mil>; Gary Higgins <Gary.Higgins@buncombecounty.org>; Jeff Foster <jrfosterjr@yahoo.com>; Jerry Vehaun <Jerry.Vehaun@buncombecounty.org>; Jessica Hocz (jessica.hocz@mountainvalleysrkd.org) <jessica.hocz@mountainvalleysrkd.org>; John Ager <jagerhng@gmail.com>; Nathan L. Pennington <Nathan.Pennington@buncombecounty.org>; Price, Zan (George) <Zan.Price@ncdenr.gov>; Terry.VanDuyn@ncleg.net
Subject: Re: Barnardsville creek restoration concept plan

Cynthia, I would add an estimated \$20,000 and 3 months for FEMA CLOMR work to be sure that is covered. Thanks, Greg

On Tue, Jul 2, 2019 at 12:37 PM Cynthia Fox-Clark <Cynthia.Fox-Clark@buncombecounty.org> wrote:

Thank you Gary (! Big time) for following this and for Greg's work so far. I think this is what is needed in that area.

I wanted to make sure that the projected cost includes the FEMA requirements of the CLOMR and LOMR for the channel work.

Thank you!
Cynthia

From: Gary Higgins

Sent: Tuesday, July 02, 2019 11:08 AM

To: Edward Harwood <erharwood@yahoo.com>; John Ager <jagerhng@gmail.com>; Terry.VanDuyn@ncleg.net; Fuemmeler, Amanda J CIV (US) <Amanda.Jones@usace.army.mil>; Cynthia Fox-Clark <Cynthia.Fox-Clark@buncombecounty.org>; Price, Zan (George) <Zan.Price@ncdenr.gov>; Jessica Hocz (jessica.hocz@mountainvalleysrkd.org) <jessica.hocz@mountainvalleysrkd.org>; Jerry Vehaun <Jerry.Vehaun@buncombecounty.org>; Jeff Foster <jrfosterjr@yahoo.com>; Greg Jennings <greg@jenningsenv.com>

<jrosterji@yahoo.com>, Greg Jennings <greg@jenningsenv.com>

Subject: FW: Barnardsville creek restoration concept plan

I am forwarding you an email from Greg Jennings regarding a conceptual plan for a long-term stream restoration project on Dillingham Creek. This looks like a good, workable plan assuming the landowners along the stream are agreeable and at this point we have not approached them. However, I did want to pass this information along as alternatives are being considered and funding is being sought.

Implementation of this plan might be worth some serious consideration since the cost seems pretty reasonable for the scope of the project and two separate projects could be avoided. The engineer's cost estimate is \$ 240,000 for construction and \$ 60,000 for the engineering and permitting. Of course, costs are dependent on bids, etc.

Please let me know what you think of this approach. Thanks for all your help. I will keep you updated as we go forward.

From: Greg Jennings <greg@jenningsenv.com>

Sent: Saturday, June 22, 2019 1:59 PM

To: Gary Higgins <Gary.Higgins@buncombecounty.org>

Cc: Jessica Hocz <jessica.hocz@mountainvalleysrkd.org>

Subject: Barnardsville creek restoration concept plan

Jessica and Gary,

Please find attached my recommended concept plan for channel realignment, boulder cross-vanes, and setback levee on right bank. Objectives are to eliminate bank erosion, transport bedload sediment through the reach to pass under the bridge, reduce flood potential to homes on right bank, and improve stream habitats. I will be happy to discuss this plan as needed.

Thank you, Greg

--

Greg Jennings, PhD, PE
Jennings Environmental PLLC
919-600-4790
greg@jenningsenv.com



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On Mon, Jun 10, 2019 at 7:14 AM Gary Higgins <Gary.Higgins@buncombecounty.org> wrote:

| Hi Greg,

That is great information, and again thank you for your help with the situation. Hopefully we can get some money to get the gravel debris removed for now and proceed from there with a good long-term solution.

From: Greg Jennings <greg@jenningsenv.com>
Sent: Friday, June 07, 2019 9:33 PM
To: Gary Higgins <Gary.Higgins@buncombecounty.org>
Cc: Jessica Hocz <jessica.hocz@mountainvalleysrkd.org>
Subject: Re: Dillingham Creek

Gary,

I looked at the LiDar data for Barnardsville and observed that the area where we were standing on the right-descending bank behind the houses is indeed the lowest area in the valley with high susceptibility to flooding, as we deduced in the field. It appears that the best long-term solutions for Dillingham Creek are to:

1. Remove flood-prone buildings from the floodplain;
2. Re-configure the bankfull channel to the equilibrium dimension to facilitate sediment transport;
3. Re-align the approach reach of channel to the bridge on Paint Fork Road to efficiently transport water and sediment;
4. Maintain sufficient floodplain with setback levees to dissipate flood flow shear stresses; and
5. Re-configure the bridge under HWY 197 to sustain adequate hydraulic capacity without sediment deposition and debris blockage to prevent backwater during floods.

Please contact me with questions. Thank you, Greg

--

Greg Jennings, PhD, PE
Jennings Environmental PLLC
919-600-4790
greg@jenningsenv.com



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On Thu, May 30, 2019 at 7:58 PM Gary Higgins
<Gary.Higgins@buncombecounty.org> wrote:

I think we can park just past the bridge that crosses Dillingham Creek on Paint Fork Road. There is a grassed area there and there is plenty of room

for a couple of vehicles. This is opposite the water tower at Ohio Electric.

Thanks again.

From: Greg Jennings <greg@jenningsenv.com>
Sent: Thursday, May 30, 2019 6:04:56 PM
To: Gary Higgins
Cc: Jessica Hocz
Subject: Re: Dillingham Creek

Gary,

Where exactly should I park for this site visit?

Thank you, Greg

--

Greg Jennings, PhD, PE
Jennings Environmental PLLC
919-600-4790
greg@jenningsenv.com



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On Thu, May 30, 2019 at 4:26 PM Gary Higgins
<Gary.Higgins@buncombecounty.org> wrote:

Hi Greg,

Yes, I am open at that time and can meet there around 10:30. Thanks so much for your help! Let me know if anything changes, but it is on my calendar.

From: Greg Jennings <greg@jenningsenv.com>
Sent: Thursday, May 30, 2019 4:24 PM
To: Gary Higgins <Gary.Higgins@buncombecounty.org>; Jessica Hocz
<jessica.hocz@mountainvalleysrcd.org>
Subject: Re: Dillingham Creek

Hello Gary,

I will be happy to visit and discuss options. Jessica called this morning and we arranged to meet next Friday morning, June 7, to visit several projects, including this one in Barnardsville at about 10:30 am. Can you meet at that time?

Thank you, Greg

--

Greg Jennings, PhD, PE

Jennings Environmental PLLC

919-600-4790

greg@jenningsenv.com



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On Thu, May 30, 2019 at 2:34 PM Gary Higgins
<Gary.Higgins@buncombecounty.org> wrote:

Hi Greg,

I am working with a landowner in Barnardsville and he wants to remove debris in the river that washed in during the April 19, 2019 storms. I agree with him

that the debris should be removed, but I also think that a long term plan on how to stabilize the stream and reduce flooding is needed. Would you be willing to just take a look at the site to give us some direction on how to go? We are at the end of the fiscal year and out of funds, but if you could give me an hour of your time when you are out that way, it would so greatly appreciated.

Thanks so much.

Gary Higgins

Director, Buncombe SWCD

[49 Mount Carmel Road, Ste. 101](#)

[Asheville, NC 28806](#)

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F. 828-250-6008

<https://www.buncombecounty.org/governing/depts/soil/default.aspx>

--

Greg Jennings
919-600-4790

From: Greg Jennings greg@jenningsenv.com
Subject: Re: Barnardsville creek restoration concept plan
Date: July 2, 2019 at 2:02 PM



To: Cynthia Fox-Clark Cynthia.Fox-Clark@buncombecounty.org
Cc: Angela Ledford angela.ledford@buncombecounty.org, Edward Harwood erharwood@yahoo.com, Fuemmeler, Amanda J CIV (US) Amanda.Jones@usace.army.mil, Gary Higgins Gary.Higgins@buncombecounty.org, Jeff Foster jrfosterjr@yahoo.com, Jerry Vahaun Jerry.Vahaun@buncombecounty.org, Jessica Hocz (jessica.hocz@mountainvalleysrcd.org) jessica.hocz@mountainvalleysrcd.org, John Ager jagerhng@gmail.com, Nathan L. Pennington Nathan.Pennington@buncombecounty.org, Price, Zan (George) Zan.Price@ncdenr.gov, Terry.VanDuyn@ncleg.net

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Thank you!

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Sent: Tuesday, July 02, 2019 11:08 AM
To: Edward Harwood <erharwood@yahoo.com>; John Ager <jagerhng@gmail.com>; Terry.VanDuyn@ncleg.net; Fuemmeler, Amanda J CIV (US) <Amanda.Jones@usace.army.mil>; Cynthia Fox-Clark <Cynthia.Fox-Clark@buncombecounty.org>; Price, Zan (George) <Zan.Price@ncdenr.gov>; Jessica Hocz (jessica.hocz@mountainvalleysrcd.org) <jessica.hocz@mountainvalleysrcd.org>; Jerry Vahaun <Jerry.Vahaun@buncombecounty.org>; Jeff Foster <jrfosterjr@yahoo.com>; Greg Jennings <greg@jenningsenv.com>
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Subject: Barnardsville creek restoration concept plan

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Greg Jennings
919-600-4790

From: Sen. Terry Van Duyn Terry.VanDuyn@ncleg.net

Subject: Re: Big Ivy River in Barnardsville

Date: April 26, 2019 at 11:20 PM

To: John Ager jagerhng@gmail.com

Cc: Erharwood@yahoo.com, Fuemmeler, Amanda J CIV (US) amanda.jones@usace.army.mil, Anthony Dowdle Anthony.Dowdle@buncombecounty.org

SV

John,

Thanks for the update. I have also contacted Jim Holland, Assistant County Manager, who reached out to Mr. Harwood. Jim told me he had set up an appointment with soil and water to meet with Mr. Harwood.

I reached out to Lee Lilly, with the governor's office as well, and he suggested that once we get an idea of the scope of the problem, we can request an appropriation as part of the Governor's statewide river management efforts which will be included in the Governor's hurricane relief funding request.

Terry

On Apr 26, 2019, at 10:48 AM, John Ager <jagerhng@gmail.com> wrote:

Eddie Harwood has contacted me about problems they are having with the Big Ivy in Barnardsville. He characterizes the river as wanting to change course over perhaps a quarter mile section. He mentions some levees (berms) that have been created to protect industrial property in the community. I have spoken with Amanda Fuemmeler with the Army Corps in hopes of getting some evaluation help with the problem. She said I should involve Soil and Water, so welcome aboard Anthony and anyone else in your office who could be of help. I think the most timely and efficient way to proceed is for someone from the Army and Corps and someone from Soil and Water join Mr. Harwood to evaluate the problem. I would love to come, but I am trapped in Raleigh for the next few weeks (except for weekends). Mr. Harwood, can you reach out and schedule a meeting? I will join the group if I am in Buncombe. Thank you, Rep. John Ager

From: Sen. Terry Van Duyn Terry.VanDuyn@ncleg.net
Subject: Re: Dillingham Creek Flood Funding
Date: June 24, 2019 at 9:22 AM
To: Edward Harwood erharwood@yahoo.com



I'm on it. I'll reply in more detail as soon as I hear back.

Terry Van Duyn

On Jun 24, 2019, at 8:57 AM, Edward Harwood <erharwood@yahoo.com<mailto:erharwood@yahoo.com>> wrote:

Good Morning everyone!

More flooding this weekend. John, Terri can you give us a update on funding for this work?

Thanks,

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URGENT REQUEST FOR ASSISTANCE: Compromised Existing Infrastructure in Flood Prone Areas of Barnardsville, NC

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From: Sen. Terry Van Duyn Terry.VanDuyn@ncleg.net
Subject: Re: Dillingham Creek Flood Funding
Date: July 30, 2019 at 4:17 PM
To: Edward Harwood erharwood@yahoo.com



I will reach out again now.

Terry Van Duyn

On Jul 30, 2019, at 3:15 PM, Edward Harwood <erharwood@yahoo.com> wrote:

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To: Price, Zan (George) <Zan.Price@ncdenr.gov>
Cc: Cynthia Fox-Clark <Cynthia.Fox-Clark@buncombecounty.org>; Greg Jennings <greg@jenningsenv.com>; Angela Ledford <angela.ledford@buncombecounty.org>; Fuemmeler, Amanda J CIV (US) <Amanda.Jones@usace.army.mil>; Gary Higgins <Gary.Higgins@buncombecounty.org>; Jeff Foster <jrfosterjr@yahoo.com>; Jerry Vehaun <Jerry.Vehaun@buncombecounty.org>; Jessica Hocz (jessica.hocz@mountainvalleysrcd.org) <jessica.hocz@mountainvalleysrcd.org>; John Ager <jagerhng@gmail.com>; Nathan L. Pennington <Nathan.Pennington@buncombecounty.org>; Terry.VanDuyn@ncleg.net
Subject: Re: [External] RE: Barnardsville creek restoration concept plan

Now we just need the 💰💰💰💰💰.

Gary, Cynthia and others thank you so much for your efforts!!!

I have spoke with Terry and she's working the political landscape for \$.

Thanks,

Eddie

On Jul 3, 2019, at 9:10 AM, Price, Zan (George) <Zan.Price@ncdenr.gov> wrote:

Sounds like a good plan. Thanks for the update

Zan

Sent from my iPhone

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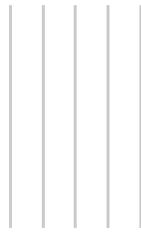
Director, Buncombe SWCD

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Cc: Edward Harwood <erharwood@yahoo.com>; John Ager <jagerhng@gmail.com>; Terry.VanDuyn@ncleg.net; Fuemmeler, Amanda J CIV (US) <Amanda.Jones@usace.army.mil>; Cynthia Fox-Clark <Cynthia.Fox-Clark@buncombecounty.org>; Price, Zan (George) <Zan.Price@ncdenr.gov>; Jessica Hocz (jessica.hocz@mountainvalleysrcd.org) <jessica.hocz@mountainvalleysrcd.org>; Jerry Vebaun <Jerry.Vebaun@buncombecounty.org>; Jeff Foster <jrfoosterjr@yahoo.com>
Subject: Re: FW: Barnardsville creek restoration concept plan

Gary,

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Thank you, Greg

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919-600-4790
greg@jenningsenv.com



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From: Jones, M Scott (Scott) CIV USARMY CESAW (US) Scott.Jones@usace.army.mil 
Subject: RE: [Non-DoD Source] Re: [External] Update
Date: June 10, 2019 at 10:21 PM
To: Edward Harwood erharwood@yahoo.com
Cc: Gary Higgins Gary.Higgins@buncombecounty.org, Cynthia Fox-Clark Cynthia.Fox-Clark@buncombecounty.org, Fuemmeler, Amanda J CIV (US) Amanda.Jones@usace.army.mil, Jessica Hocz (jessica.hocz@mountainvalleysrzd.org) jessica.hocz@mountainvalleysrzd.org, Price, Zan (George) Zan.Price@ncdenr.gov, Jim Holland Jim.Holland@buncombecounty.org, Aiken, Stan E stan.aiken@ncdenr.gov



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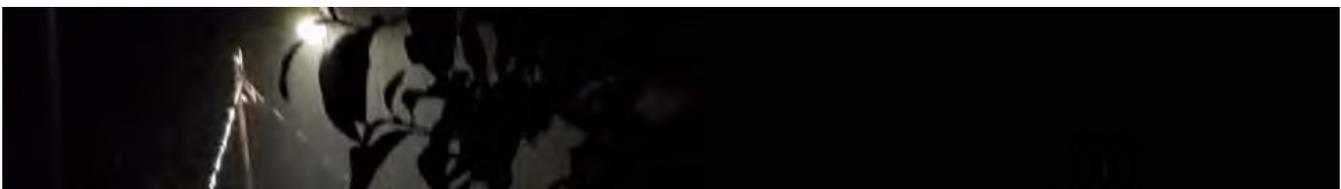
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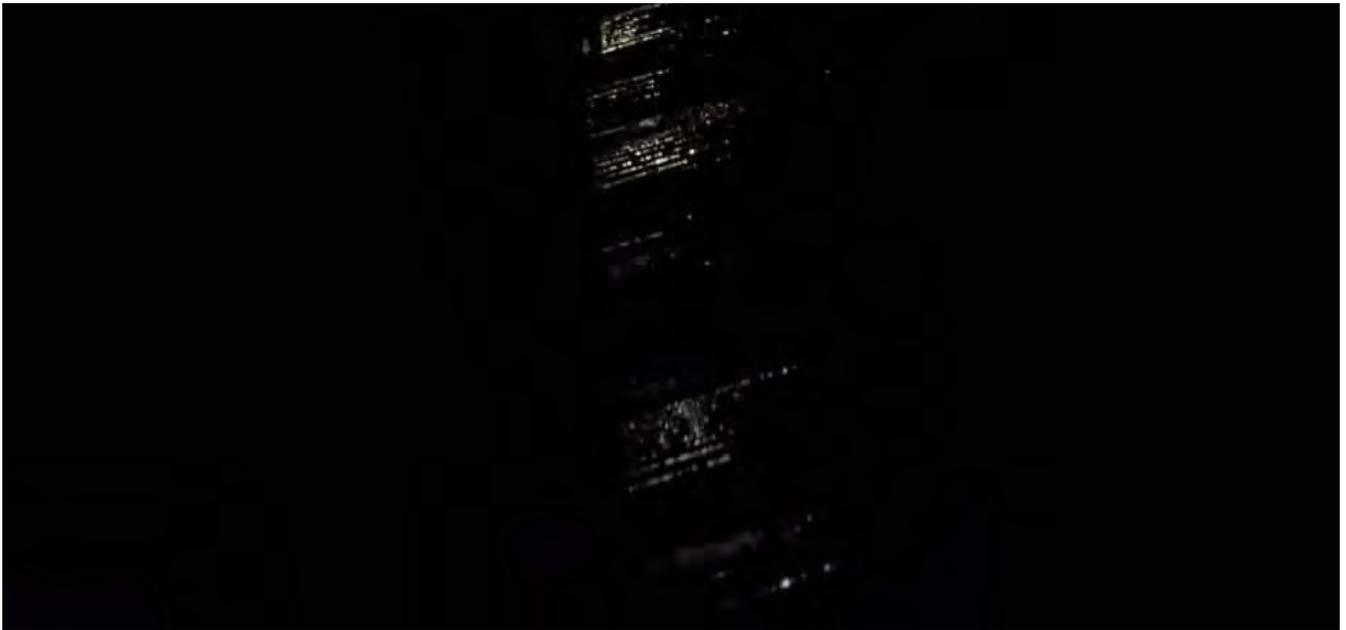
Scott Jones, Chief
Asheville and Charlotte Regulatory Field Offices
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151 Patton Avenue, Room 208
Asheville, NC 28801-5006
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Thanks,

Eddie

On Jun 4, 2019, at 8:39 AM, Price, Zan (George) <Zan.Price@ncdenr.gov> wrote:

Additionally, since these waters are classified trout, you might need a trout buffer waiver from the Division of Energy, Minerals, and Land Resources (DEMLR) depending on the scope of the work. Stan Aiken is the local contact for trout buffer waivers (copied on this email). He can also be reached at 828 296-4500

Regards,

Zan Price, P.E.

Assistant Regional Supervisor – Asheville Regional Office
Water Quality Regional Operations Section
NCDEQ – Division of Water Resources

828 296 4662 office
828 231 9634 mobile
zan.price@ncdenr.gov

2090 U.S. Hwy. 70
Swannanoa, N.C. 28711

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Sent: Monday, June 03, 2019 4:51 PM
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Cc: Cynthia Fox-Clark <Cynthia.Fox-Clark@buncombecounty.org>;
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<Jim.Holland@buncombecounty.org>
Subject: [External] Update

CAUTION: External email. Do not click links or open attachments unless you verify.
Send all suspicious email as an attachment to report.spam@nc.gov

Hi Eddie,

Just wanted to update you on what our office has done to facilitate removal of debris in Dillingham Creek opposite the Ohio Electric plant. I met with Scott Jones with the US Army Corps of Engineers and Cynthia Fox-Clark from Buncombe County Planning at the site on May 13th to get their input on regulatory requirements from their respective agencies. We all agreed that removal of the rock and gravel debris is necessary and that could be the first step in finding a long-term solution to the flooding issue. That work would require a permit from the Corps, as well as a permit from Buncombe County Planning after the necessary engineering and planning has been done. On May 15th, I met at the site with Zan Price with the NC Department of Environmental Quality and he stated that since the stream is trout water, the work would need to be done at specific times of the year. I also contacted the USDA Natural Resources Conservation Service to see if the work would qualify for their Emergency Watershed Protection program. I was told that since no disaster declaration had been made for the April 19th storm, it was unlikely that it would qualify but the information was passed on to the state office just in case some kind of funding became available. I have an appointment to meet with Jessica Hocz with Mountain Valleys Resource Conservation and Development and Greg Jennings, a private engineer to look at the site on Friday, June 7th at 10:30 a.m. to get additional input on how to proceed.

At this point, it looks like the project is very possible. We just need to find ways to come up with a short-term plan to get the debris removed from the stream and then look at a long-term solution for flooding of that area. The Buncombe SWCD is very interested in helping find a solution, and we are prepared to help with permits and other work that is within our capability. Right now funding seems to be the primary obstacle, and the design, planning, permitting, and construction will be expensive.

I hope you can make our meeting on Friday. Greg Jennings is an excellent engineer and is well trained in stream restoration and it will be interesting to hear his comments.

Thanks so much. Don't hesitate to call with any questions or concerns.

Gary Higgins

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From: Cynthia Fox-Clark Cynthia.Fox-Clark@buncombecounty.org 
Subject: RE: [Non-DoD Source] Re: [External] Update

Date: June 11, 2019 at 12:37 PM

To: Jones, M Scott (Scott) CIV USARMY CESAW (US) Scott.Jones@usace.army.mil, Edward Harwood erharwood@yahoo.com, Nathan L. Pennington Nathan.Pennington@buncombecounty.org

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CF

Good afternoon Eddie and all!

I went out and looked at the site again, too. I agree that debris removal is the first step of what could be a major project. Hopefully the debris removal will remediate most of the immediate flooding from the most frequent rainfall events.

With hope and anticipation of funding becoming available, I need to go ahead and provide exactly what is needed on my end to permit the project, so the scope of work can reflect these requirements when the engineer is hired. In terms of the County's floodplain ordinance requirements, the following would be required: flood development permit application for the proposed debris removal with attached site plan showing what is being proposed and where; and engineer No Rise certification for returning the site to the pre-flood conditions. The conditions of the permit would be a final No Rise certification once the removal is complete, and a final floodplain administrator site inspection. If the project exceeds returning the site to the pre-flood conditions (i.e., the channel is modified, instream structures or features are added, etc.), this would most likely trigger the requirement of a Conditional Letter of Map Revision (CLOMR) prior to permitting- which in terms of time and funding we do not want to see happen (yet*, if there is greater funding available in the future for a more complete analysis and modification).

Thank you,
Cynthia

*Cynthia Fox-Clark, AICP, CFM
Planner III
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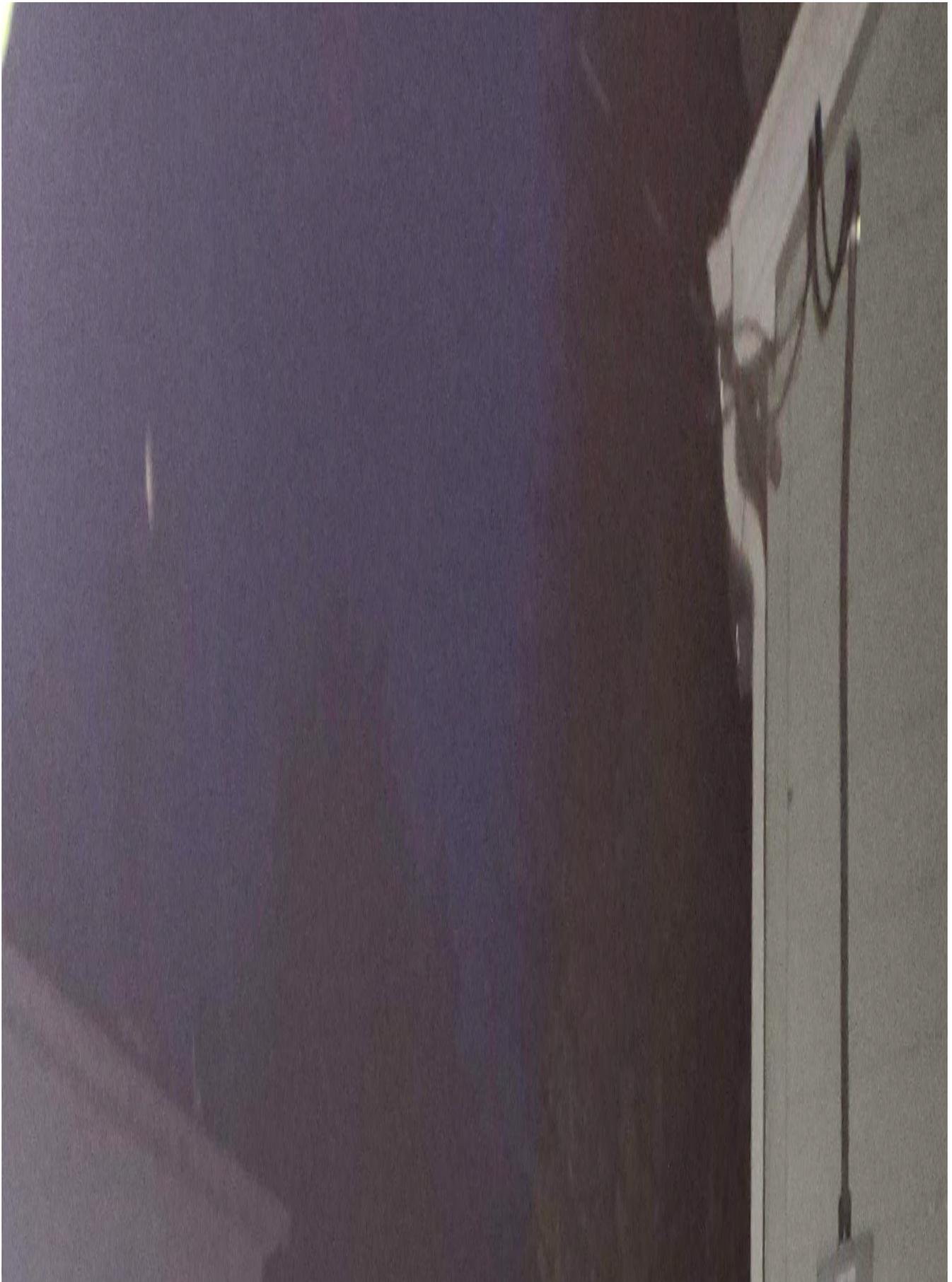
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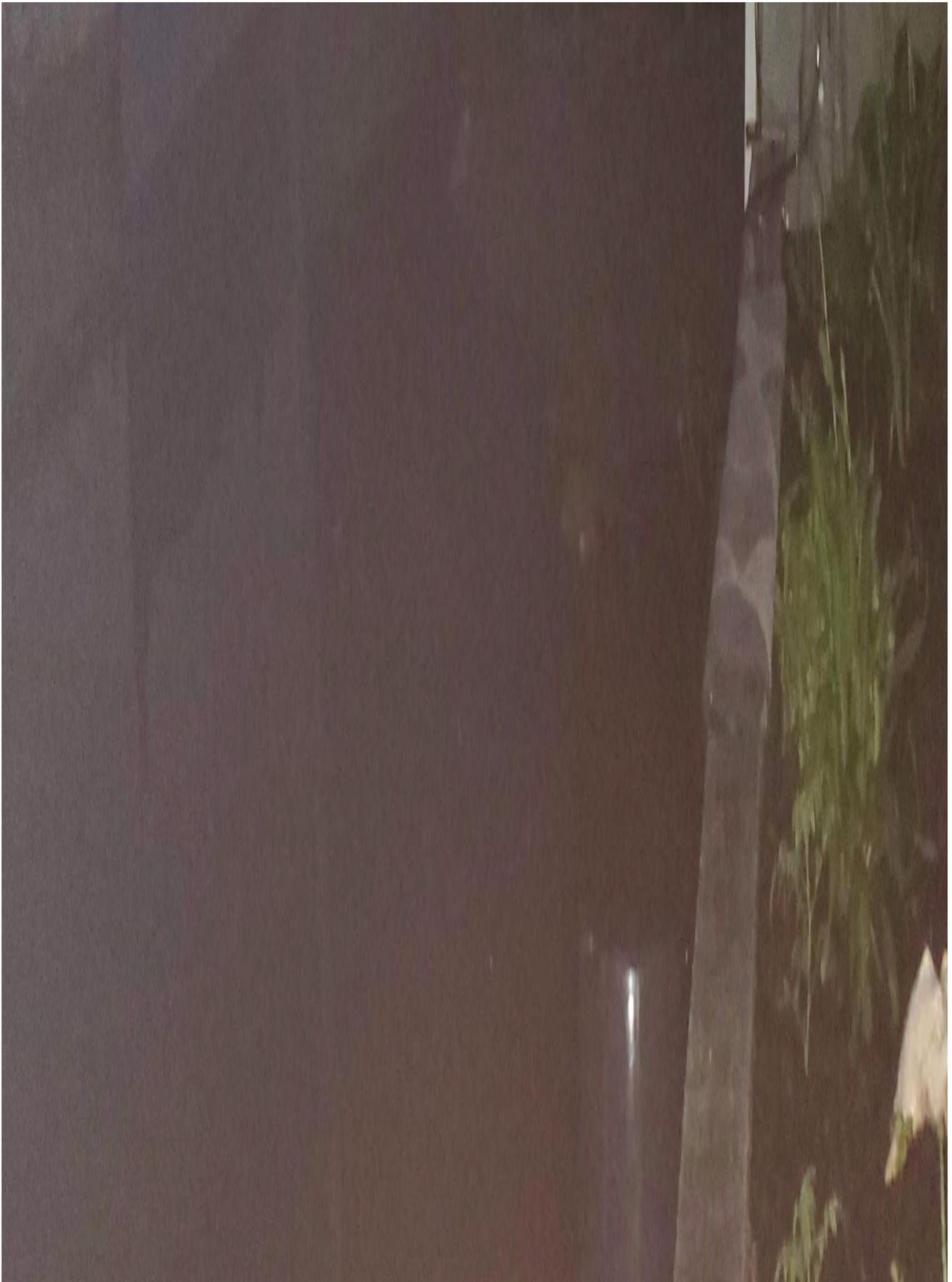




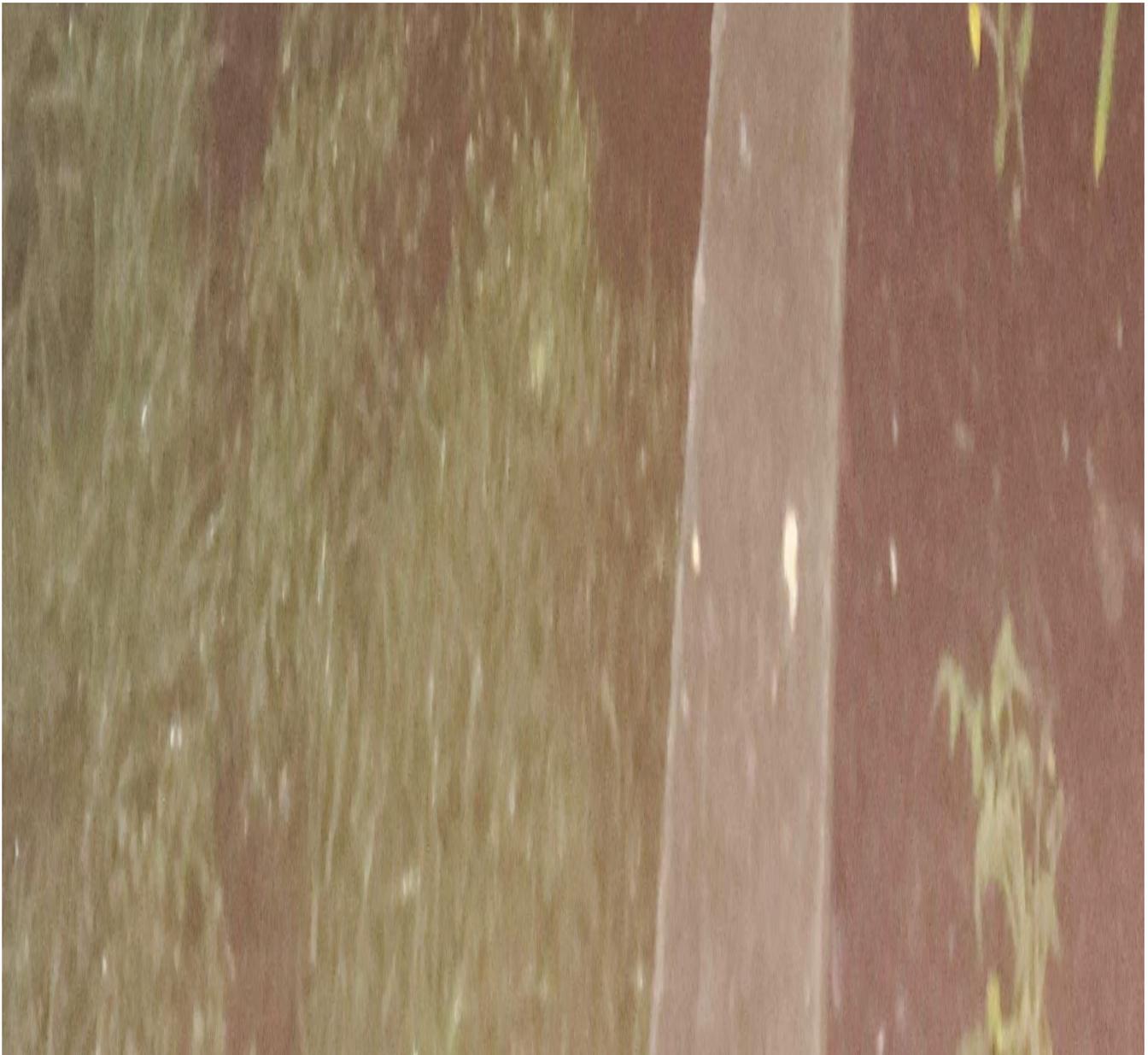












Thanks,

Eddie

On Jun 4, 2019, at 8:39 AM, Price, Zan (George) <Zan.Price@ncdenr.gov> wrote:

Additionally, since these waters are classified trout, you might need a trout buffer waiver from the Division of Energy, Minerals, and Land Resources (DEMLR) depending on the scope of the work. Stan Aiken is the local contact for trout buffer waivers (copied on this email). He can also be reached at 828 296-4500

Regards,

Zan Price, P.E.

Assistant Regional Supervisor – Asheville Regional Office
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From: Gary Higgins <Gary.Higgins@buncombecounty.org>
Sent: Monday, June 03, 2019 4:51 PM
To: Edward Harwood <erharwood@yahoo.com>
Cc: Cynthia Fox-Clark <Cynthia.Fox-Clark@buncombecounty.org>;
Scott.Jones@usace.army.mil; Price, Zan (George) <Zan.Price@ncdenr.gov>;
Fuemmeler, Amanda J CIV (US) <Amanda.Jones@usace.army.mil>; Jessica
Hocz (jessica.hocz@mountainvalleysrcd.org)
<jessica.hocz@mountainvalleysrcd.org>; Jim Holland
<Jim.Holland@buncombecounty.org>
Subject: [External] Update

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Hi Eddie,

Just wanted to update you on what our office has done to facilitate removal of debris in Dillingham Creek opposite the Ohio Electric plant. I met with Scott Jones with the US Army Corps of Engineers and Cynthia Fox-Clark from Buncombe County Planning at the site on May 13th to get their input on regulatory requirements from their respective agencies. We all agreed that removal of the rock and gravel debris is necessary and that could be the first step in finding a long-term solution to the flooding issue. That work would require a permit from the Corps, as well as a permit from Buncombe County Planning after the necessary engineering and planning has been done. On May 15th, I met at the site with Zan Price with the NC Department of Environmental Quality and he stated that since the stream is trout water, the work would need to be done at specific times of the year. I also contacted the USDA Natural Resources Conservation Service to see if the work would qualify for their Emergency Watershed Protection program. I was told that since no disaster declaration had been made for the April 19th storm, it was unlikely that it would qualify but the information was passed on to the state office just in case some kind of funding became available. I have an appointment to meet with Jessica Hocz with Mountain Valleys Resource Conservation and Development and Greg Jennings, a private engineer to look at the site on Friday, June 7th at 10:30 a.m. to get additional input on how to proceed.

now to proceed.

At this point, it looks like the project is very possible. We just need to find ways to come up with a short-term plan to get the debris removed from the stream and then look at a long-term solution for flooding of that area. The Buncombe SWCD is very interested in helping find a solution, and we are prepared to help with permits and other work that is within our capability. Right now funding seems to be the primary obstacle, and the design, planning, permitting, and construction will be expensive.

I hope you can make our meeting on Friday. Greg Jennings is an excellent engineer and is well trained in stream restoration and it will be interesting to hear his comments.

Thanks so much. Don't hesitate to call with any questions or concerns.

Gary Higgins

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