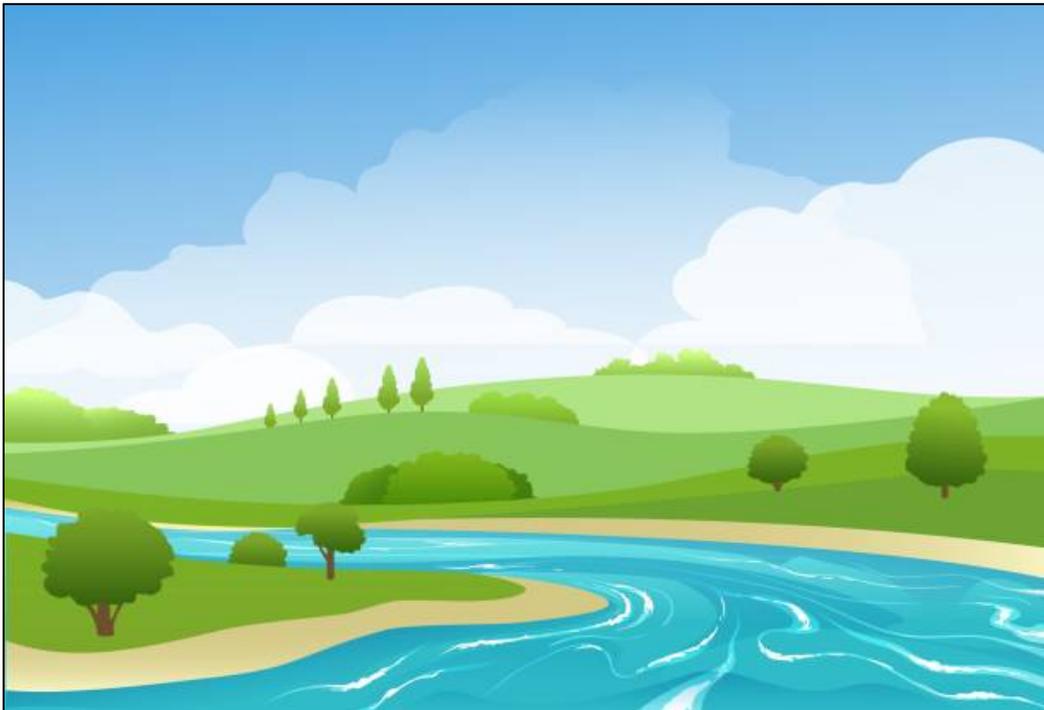




2022 Community Rating System (CRS) Recertification Submittal

Reporting Period:

August 1, 2021 to August 1, 2022



Orange County, North Carolina

NFIP Number: 370342

August 2022

DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency

OMB Control Number: 1660-0022
Expiration: 10/31/2023

CRS COMMUNITY CERTIFICATIONS

Community _____ State _____ CID _____
(6-digit NFIP Community Identification Number)

Note: Please cross out any incorrect items, below, as needed, and insert the updated information.

CC-213 Recertification

Recertification due date _____

Chief Executive Officer

CRS Coordinator

Name

Title

Address

Phone number

E-mail address

I hereby certify that _____ [community name] is implementing the following activities on the attached pages as credited under the Community Rating System and described in our original application to the CRS and subsequent modifications.

I hereby certify that, to the best of my knowledge and belief, we are in full compliance with the minimum requirements of the NFIP and we understand that we must remain in full compliance with the minimum requirements of the NFIP. We understand that at any time we are not to be in full compliance, we will retrograde to a CRS Class 10.

I hereby certify that we will continue to maintain FEMA Elevation Certificates on all new buildings and substantial improvements constructed in the Special Flood Hazard Area following the date at which we joined the CRS.

I hereby certify that if there are one or more repetitive loss properties in our community that we must take certain actions that include reviewing and updating the list of repetitive loss properties, mapping repetitive loss areas, describing the cause of the losses, and sending an outreach project to those areas each year, and if we have fifty (50) or more unmitigated repetitive loss properties we must earn credit under Activity 510 (Floodplain Management Planning) for either a repetitive loss area analysis (RLAA) or a floodplain management plan (FMP).

I hereby certify that, to the best of my knowledge and belief, we are maintaining in force flood insurance policies for insurable buildings owned by us and located in the Special Flood Hazard Area (SFHA) shown on our Flood Insurance Rate Map. I further understand that disaster assistance for any community-owned building located in the SFHA is reduced by the amount of National Flood Insurance Program (NFIP) flood insurance coverage (structure and contents) that a community should be carrying on the building, regardless of whether the community is carrying a policy.

Signature _____ (Chief Executive Officer)

Date _____

CC-213-1

[continued on next page]

Community _____ State _____ CID _____
 (6-digit NFIP Community Identification Number)

CRS Program Data Table	A. In the SFHA	B. In a regulated floodplain outside the SFHA	C. In the rest of the community
1. Last report's number of buildings in the SFHA (bSF) (line 6, last report)			
2. Number of new buildings constructed since last report	+		
3. Number of buildings removed/demolished since last report	-		
4. Number of buildings affected by map revisions since last report (+ or -)			
5. Number of buildings affected by corporate limits changes (+ or -)			
6. Current total number of buildings in the SFHA (bSF) (total lines 1-5)			
7. Number of substantial improvement/damage projects since last report			
8. Number of repetitive loss properties mitigated since last report			
9. Number of LOMRs and map revisions (not LOMAs) since last report			
10. Acreage of the SFHA (aSFHA) as of the last report (line 13, last report)			
11. Acreage of area(s) affected by map revisions since last report (+ or -)			
12. Acreage of area(s) affected by corporate limits changes (+ or -)			
13. Current acreage of the SFHA (total lines 10-12)			
14. Primary source for building data:			
15. Primary source for area data:			
16. Period covered:		Current FIRM date	
<i>If available, the following data would be useful:</i>			
17. Number of new manufactured homes installed since last report			
18. Number of other new 1 -4 family buildings constructed since last report			
19. Number of all other buildings constructed/installed since last report			

Comments:

(Please note the number of the line to which the comment refers.)

Community _____ State _____ CID _____
(6-digit NFIP Community Identification Number)

Instructions

At the first verification visit after the effective date of the 2013 *CRS Coordinator's Manual*, ONLY LINES 6 AND 13 NEED TO BE COMPLETED. These lines form the baseline data about the number of buildings and area of the SFHA for when the table is completed as part of the next annual recertification. The "period covered" entered in line 16 is the date that lines 6 and 13 are first completed. At all subsequent annual recertifications and cycle verification visits, the entire table is completed. The information in lines 6 and 13 from the last report is transferred to lines 1 and 10 in the next report.

Instructions for the Columns

Column A numbers are for the SFHA (the A and V Zones shown on the Flood Insurance Rate Map) (FIRM)). Use the FIRM currently in effect, not a draft or pending revision.

Column B is completed only if the community receives CRS credit for regulating floodplain development outside the SFHA under Activity 410 (Floodplain Mapping) or Activity 430 (Higher Regulatory Standards).

Column C numbers help relate what happens in the floodplain to what is happening in the rest of the community. Enter "0" if there are no numbers to report for this period. Do not leave a cell blank. Do not fill in the shaded boxes.

Instructions for the Lines

Lines 1-7 deal with buildings.

- o Section 301.a of the *CRS Coordinator's Manual* defines what constitutes a "building" and lists examples of structures that are not counted as "buildings" by the CRS.
- o Section 302.a of the *CRS Coordinator's Manual* describes how the CRS counts buildings. For example, accessory structures are not counted.
- o As noted in Section 302.a, to determine building counts, communities may use any method that yields reasonably good estimates of the number of buildings. Examples of acceptable methods are listed in Section 302.a. Precision is less important for large numbers. For example, the impact of the numbers will not change much if there are 10,000 buildings or 10,100 buildings.
- o If a building is out of the SFHA, but in a parcel that is partly in the SFHA, it is not counted in column A --In the SFHA.
- o In line 14, note how the building counts were obtained or estimated. Use the comments area, if needed.

Line 4 refers to map revisions. These include physical map revisions, Letters of Map Revision (LOMR), and Letters of Map Amendment (LOMA). If a building is removed from the SFHA by FEMA through a LOMA, but the community still administers its floodplain management regulations on the property, the building should not be included in the line 4 count in column A --In the SFHA. However, communities that still regulate areas removed by LOMAs can receive credit under Activities 410 or 430. If the community is receiving such credit, the building should be counted under column B --In a regulated floodplain outside the SFHA.

Line 7 is for the total number of buildings that were substantially improved plus the number of buildings that were substantially damaged during the period covered.

Lines 10 -13 deal with areas.

- o These areas are based on the areas shown on the community's FIRM including LOMRs or LOMAs. Section 403.b discusses those portions of the SFHA that are subtracted from the area of the SFHA to calculate the community's aSFHA used in credit calculations.
- o Section 403.e of the *CRS Coordinator's Manual* discusses calculating areas for CRS purposes.
- o Section 403.e notes that communities "should not spend an inordinate amount of time measuring areas." As with buildings, communities may use any method that yields reasonably good estimates. Examples of acceptable approaches are listed in Section 403.e.
- o Line 13 asks for the current acreage of the SFHA. The best source for this number is a GIS layer that shows the SFHA. If the community does not have GIS, the county, regional agency, or state NFIP mapping office may have SFHA layers and may be able to provide the data. If the community has a relatively recent FIRM, the study contractor or consulting engineer may have the data.
- o In line 15, note how the area calculations were obtained or estimated. Use the comments area, if needed.

Lines 17 -19 are voluntary, if the numbers are readily available.

- o Line 17 includes replacing an existing manufactured home with a new one. The newly placed manufactured home is counted as a new, post-FIRM, building.
- o The total of lines 17 -19 should equal the value entered in line 2.

CC-213-3

COMMUNITY RATING SYSTEM ANNUAL RECERTIFICATION

Your community has been verified as receiving CRS credit for the following Activities.

- If your community is still implementing these activities the CRS coordinator is required to put his or her initials in the blank (do not use a checkmark or an “X”) and **attach** the appropriate items. A blank with no initials indicates you are not implementing that Activity anymore, and will result in loss of points (and possible CRS Class).
- If the word “**attached**” is used you must provide the requested documentation for that Activity. If no documentation has been acquired for that Activity, please explain why there is no documentation from the past year.

C.S. 310 EC: We are maintaining Elevation Certificates, Floodproofing Certificates, Basement Floodproofing Certificates, V Zone design certificates and engineered opening certificates on all new construction and substantially improved buildings in our Special Flood Hazard Area (SFHA) and make copies of all Certificates available at our present office location. [C.S.] *Initial here is you have had no new construction or substantial improvement in the SFHA in the last year.*

C.S. 310 EC: **Attached is the permit list for only new or substantially improved structures in the SFHA that have been completed in the last year.** We have permitted 0 new building and substantial improvements in the SFHA during this reporting period.

N/A 310 EC: **Attached are all the Certificates for new or substantially improved structures that have been completed during this reporting period that are included on the above permit list.** (Note: The total number of Elevation and Floodproofing certificates should match the number of permits issued and completed within the reporting period defined above. All permits issued for new construction or substantial improvement within the V zone should have both an Elevation Certificate and a V Zone Certificate, and all buildings with basements within the basement exemption communities should have both an Elevation Certificate and a Basement Floodproofing Certificate).

C.S. 310 CCMP: We continue to follow our Construction Certificate Management Procedures and update them when needed.

C.S. 320 MI 1: We are providing basic flood information to inquirers. We also continue to provide the following to inquirers:

C.S. MI 2 additional FIRM information

C.S. MI 4 flood depth data

C.S. MI 7 natural floodplain functions

C.S. 320 MI: **Attached is a copy of the publicity for the credited elements of this service this year.**

COMMUNITY RATING SYSTEM ANNUAL RECERTIFICATION

- C.S. 320 MI: **Attached is a copy of one page of the log, or 3 letters if using letters or other like records to document the service.**
- C.S. 320 MI: We are continuing to keep our FIRM updated and maintain old copies of our FIRM.
- C.S. 330 OP: We continue to conduct or provide all credited outreach projects.
- C.S. 340 ODR: People looking to purchase flood prone property are being advised of the flood hazard through our credited hazard disclosure measures.
- C.S. 350 LIB/LPD: Our public library continues to maintain flood protection materials.
- C.S. 350 WEB: We continue to conduct an annual review and update of the information and links in our flood protection website.
- C.S. 360 PPA: We continue to provide flood protection advice to inquirers.
- C.S. 360 PPV: We continue to provide on-site flood protection assistance to inquirers.
- C.S. 360 FAA: We continue to provide advice on financial assistance programs to inquirers.
- C.S. 360 PPA/PPV/FAA: **Attached is a copy of one page of the log, or 3 letters if using letters, memos or other like records to document the service.**
- C.S. 360 PPA/PPV/FAA: **Attached is a copy of the document that told others about these services this year.**
- C.S. 420 LZ/OSI: We continue to enforce our ordinance(s) for low-density zoning and/or open space incentives. *Initial here if you have changed the allowable density of development in any of your zoning districts, rezoned parcels in the floodplain or changed your open space incentives. **Attach a copy of the amended regulations, provide a summary of the changes, and mark up the regulation indicating what's been changed.***
- C.S. 430: We continue to enforce the floodplain management provisions of our zoning, subdivision and building code ordinances for which we are receiving credit. *Initial here if you have amended your floodplain regulations. **Attach a copy of the amended regulations, provide a summary of the changes and mark up the regulations indicating what's been changed.***

COMMUNITY RATING SYSTEM ANNUAL RECERTIFICATION

- C.S. 430 RA: We continue to enforce our procedures for administering our floodplain management regulations. If applicable, we also continue to employ CFMs and staff who took credited training courses. We currently have 0 CFMs on staff.
- C.S. 440 AMD: We continue to use and update our flood data maintenance system on an annual basis as needed.
- C.S. 440 BMM: We continue to maintain our system of Benchmarks. [] *Initial here if any Benchmarks were found to be missing or inaccurate. **Attach a copy of the correct elevation or a description of the missing Benchmark(s).***
- C.S. 450 ESC/WQ: We continue to enforce the provisions of our zoning, subdivision and building codes as they pertain to erosion and sediment control and water quality.
- C.S. 510 FMP: **Attached is a copy of our floodplain management plan's annual progress report for the action items contained in the plan.** We have included a progress report template for you to use (in the email notification) if you don't have one of your own.
- C.S. 510 FMP: We have provided copies of this progress report to our governing board and local media.
- C.S. 520 AR: We continue to maintain as open space the lots where buildings were acquired or relocated out of the floodplain. [] Initial here if there have been any changes (additions or deletions) to the parcels credited as open space. Attach a description of those changes.

Additional Comments:

Attachments:

See attached. This entire submittal (inclusive of cover page and divider pages) is 206 pages.

Activity 310

ORANGE COUNTY, NORTH CAROLINA
COMMUNITY RATING SYSTEM (CRS) RECERTIFICATION – AUGUST 2022
ACTIVITY 310 – ELEVATION CERTIFICATES:

The County requires, reviews, approves, and maintains elevation certificates for projects within our planning jurisdiction.

NOTE: Orange County prohibits development within Special Flood Hazard Areas (SFHAs) with the exception of certain roadway, utility infrastructure, stream restoration/mitigation projects meeting set criteria. This includes placement of fill material and/or mass grading. Roadway projects are required to provide a 'No Rise' certification or go through applicable CLOMR and LOMR proceedings.

For the August 1, 2021 to August 1, 2022 reporting period, there were no new buildings constructed within the Orange County jurisdictional SFHA, therefore Orange County has no new Elevation Certificates to report.

As reported in the 2021 CRS audit cycle, County staff has been working with several parties on utility and roadway projects, some of which are going through applicable CLOMR and LOMR procedures. Orange County staff has involved appropriate State officials with the review of these projects, which include:

- 1. The Lodges at Chapel Hill:** Single-family residential subdivision that as a roadway, constructed to NC Department of Transportation (NCDOT) public road standards, crossing the floodplain.

The CLOMR for the project was approved in the Spring of 2019 and the process to formally amend the FIRM was proceeding. Development activity has since commenced, but construction is not yet completed as of August 2022. It is anticipated that the LOMR for the road crossing will be completed within the next few months and will be included in next year's CRS reporting period.

THIS PROJECT IS STILL ON-GOING

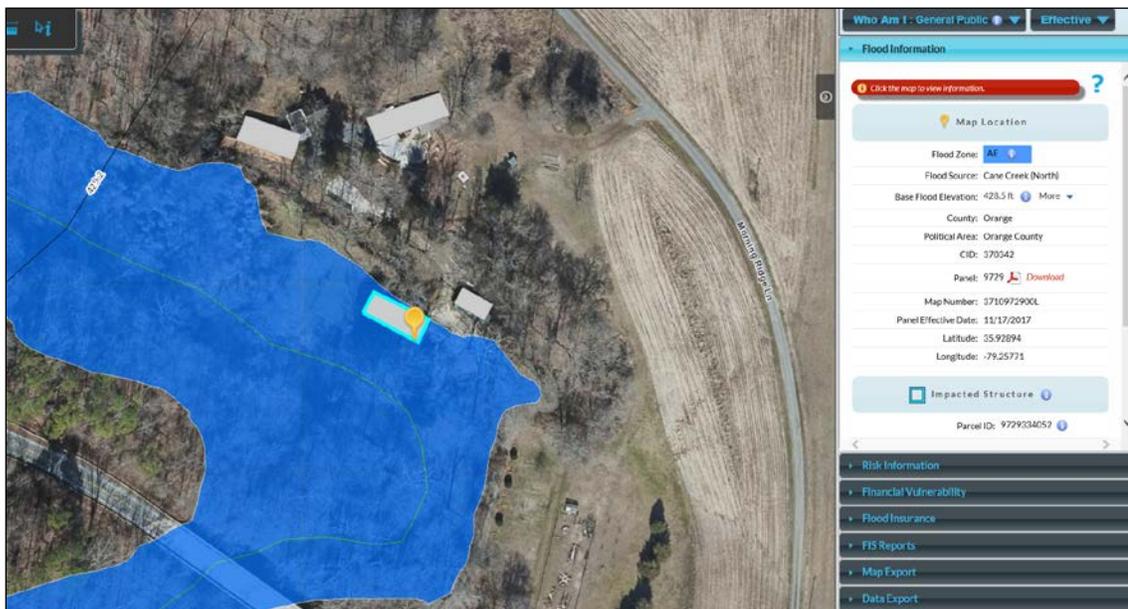
- 2. Research Triangle Logistics Park (RTLP):** A LOMR (Case No. 21-04-0006P) for a floodplain area reduction in the area affected by this potential project became effective on February 10, 2022. These parcels, further identified utilizing Orange County Parcel Identification Numbers (PINs) 9863-71-8857 and 9863-91-6573, are intended for development as an industrial/warehouse park.

THIS PROJECT IS CURRENTLY ON HOLD BASED ON FEEDBACK FROM THE POTENTIAL DEVELOPER. NO CONSTRUCTION HAS COMMENCED.

For reference, we have included our standard operating procedure for elevation certificates, which is also available on the County's website, in a standard operating procedures (SOP) document to provide additional required detail. Elevation certificates are available on the County website for review. The link can be accessed at: <https://www.orangecountync.gov/1325/Floodplain-Management>.

Staff is currently working with the property owner(s) for the following development project(s) which will likely require elevation certificates upon construction completion:

- **PIN 9729-33-4052, 7923 Morrow Mill Road.** Beginning in the fall of 2020, staff meet with the property owner of 7923 Morrow Mill Road to discuss option(s) associated with an existing residential structure within a SFHA. As you will note on (portion of FRIS attached):



There is an existing single-family residence within the SFHA. The structure, erected in the late 1800's/early 1900's, is currently at an elevation of 425 ft. (based on available County GIS map data). FE for the parcel is 430.5 ft. (includes County 2-ft. freeboard requirement). The flood-depth at structure is currently 5.5 ft.

The property owner has received all applicable permits and is currently commencing construction on this project to raise the BFE to elevation 430.5 ft. The property owner anticipates construction completion within the next few months and an associated elevation certificate will likely be included in next year's CRS reporting period.

PLANNING & INSPECTIONS DEPARTMENT
Craig N. Benedict, AICP, Director

Current Planning
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131 W. Margaret Lane
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Hillsborough, NC 27278



Construction Certificate Management Procedures

Orange County, North Carolina

BACKGROUND:

The Orange County Planning and Inspections Department is responsible for the administration/enforcement of development issues within Orange County North Carolina, including permitting, inspection, and review of all construction/land use development. This work includes the creation of and maintenance of all building/zoning/floodplain development permit files and administrative documents (ordinances, building guides, applications, forms, outreach materials, etc.) related to development.

The Department has two (2) separate divisions responsible for the permitting/coordination on development projects from the enforcement of State building code regulation(s) and land use regulations, specifically:

- Current Planning (land use administration/enforcement); and
- Building Inspections (administration/enforcement of State building code).

The Current Planning division staff also serve as the County Floodplain and Watershed administrator(s). Enforcement of erosion control/stormwater guidelines falls to the Erosion Control Division, which is also part of the Planning and Inspections Department.

All inspections and permit/plan reviews are conducted by the Building Inspections/Current Planning divisions as well as all permit approvals. Land use development regulations (i.e. zoning, subdivision, floodplain development, watershed management, environmental management, etc.) are all contained within the Unified Development Ordinance (UDO).

The purpose of this document is to explain our management procedures for review of Elevation Certificates and all other required floodplain-related construction certificates including, Floodproofing Certificates, and engineered flood opening certificates. These procedures outline the types of certificates required, the collection and review of all certificates, how corrections should be made, where the certificates are stored/archived, and how we make these certificates available to the public.

(A) Types of Certificates Required:

An Elevation Certificate (FEMA Form 81-31) or Flood Proofing Certificate (FEMA Form 81-65) is required after the reference level is established/completed in order for staff to complete the processing of a development application.

STAFF COMMENT: For all development/permit requests received by the County, Current Planning staff reviews the proposal in order to determine the lowest adjacent grade of the property where development activity is proposed (i.e. location of structure). If this grade is a minimum of five (5) feet or greater above established base flood elevations, as depicted on adopted Federal Insurance Rate Maps (FIRM), the permit is processed and the appropriate elevation information is included in the approval. If not, then the applicant is required to complete a Floodplain Development Permit Application and follow the procedures described within the UDO.

Orange County prohibits new construction within the SFHA. Further, staff enforces a 'floodplain buffer' measured from the identified/mapped area of 1% annual chance of flooding ranging from 65 ft. to 80 ft. in width based on the slope of the property. This buffer area is intended to be preserved in a natural, vegetative, state.

For pre-FIRM structures, certificates are typically required when structures exceed substantial damage/improvement as detailed within the UDO. Substantially damaged structures can only be re-erected/re-constructed in accordance with applicable floodplain development standards (i.e. they must be relocated outside of the SFHA or obtain a variance to allow the structure to remain if there is no other practical alternative for them to be moved outside of the SFHA).

(B) When Certificates are Required:

Applicants are required to submit an Elevation Certificate marked "construction drawings" with the building/zoning/floodplain development permit application(s), as required under Section 2.6.4 of the UDO. Per this section, certification(s) are required within 21 calendar days of:

- (1) Establishment of the reference level elevation (i.e. base flood elevation and elevation of the proposed/existing structure), or
- (2) Flood proofing, by whatever construction means

whichever is applicable.

This 'certificate' shall be used to determine if the proposed design is in compliance with Section(s):

- 1.1.3 *Flood Damage Prevention Authority – Basis for Establishment;*
- 1.10 *Floodplain Administrator;*

- 2.6 *Floodplain Development Application Permit and Certificate Requirements*;
- 6.13 *Stream Buffers*;
- 6.21 *Flood Regulations*;
- Article 8 *Nonconformities*;
- Article 9 *Enforcement*; and
- Article 10 *Definitions*

of the UDO.

STAFF COMMENT: It is the duty of the permit holder to submit to staff a certification of the elevation of the reference level, or flood proofing elevation, whichever is applicable, in relation to mean sea level. Said certification shall be prepared by, or under the direct supervision of, a North Carolina licensed professional Land Surveyor or Professional Engineer and certified by them.

Elevation Certificates: After the foundation is built, and the elevation of the lowest floor is determined, another Elevation Certificate shall be submitted that is marked "*building under construction*." This will document the elevation of surrounding grades and the lowest floor to ensure they comply with the approved plans before further construction is allowed. Once construction on the building is finished and all adjacent grading is finalized, a complete and correct "finished-construction" Elevation Certificate must be submitted by the applicant to show the "as-built" characteristics of the building. A "finished-construction" Elevation Certificate must be received, reviewed, corrected if necessary, and approved by the Current Planning staff before a Certificate of Compliance (CoC) is issued by Building Inspections allowing for the occupancy of the structure.

Flood proofing Certificate: Orange County will still require an Elevation Certificate to help verify compliance with the UDO when a flood proofing certificate is proposed/allowed.

A complete and correct flood proofing certificate is required to be submitted to the Current Planning division once construction is finished on the building but before issuing a certificate of occupancy. Current Planning staff reviews the document with Inspections staff prior to the issuance of the CoC.

Basement exception: Orange County does not have a basement exemption in the UDO.

Coastal high hazard zoned: Orange County does not have high hazard (i.e. V) zones.

(C) What Department Collects/Reviews Certificates:

Current Planning staff, who serve as the County Floodplain Administer, collects and reviews the certificates.

Once submitted, staff logs the certificate into our permit tracking system. Staff reviews the certificate data submitted. Copies are provided to the County Engineer, part of the Erosion Control division, and Inspections Director for courtesy/peer review.

Staff review the certificate, including all supporting documentation, to ensure all applicable building and development ordinances and standards are met as well as to ensure compliance with applicable NFIP requirements.

Deficiencies detected during this review shall be corrected by the permit holder immediately and before further work being permitted to proceed. Failure to submit the certification or failure to make required corrections shall be cause to issue a stop-work order for the project.

As previously indicated, a Final As-Built Elevation Certificate (FEMA Form 81-31) is required after construction is completed and prior to the issuance of a Certificate of Compliance/Occupancy allowing for the use of the structure.

It is the responsibility of the permit holder to submit to staff a certification of final as-built construction of the elevation of the reference level and all attendant utilities. As previously indicated, elevation certification(s) shall be prepared by, or under the direct supervision of, a North Carolina licensed professional Land Surveyor or Professional Engineer and certified by the same. In some instances, another certification may be required to certify corrected as-built construction.

(D) How Certificates are corrected:

When an error is identified, the following method(s) are employed to correct same consistent with local ordinances and the CRS manual:

- (1) For any inaccurate or incomplete information in Section C2, Current Planning staff requires a new certificate from the applicant or his/her representative (i.e. surveyor/engineer/architect). Staff will identify, in separate correspondence, the issues and provide assistance on how to correct same;
- (2) For inaccurate/incomplete information in other sections of the certificate, as a general rule Current Planning staff provide guidance/instructions on how to fix same within a separate letter/memo to the applicant requiring an updated certificate to be provided.

Once a revised/updated/corrected certificate is received, it is reviewed through the same process as detailed herein.

Elevation Certificates with identified errors are returned to the applicant within 7 business days for immediate correction. Under no circumstances will Current Planning staff accept a finished-construction Elevation Certificate until all corrections deemed appropriate/required are addressed.

In no cases shall a Certificate of Compliance/Occupancy for a permit be granted until the Elevation Certificate has been reviewed/approved consistent with the process detailed herein.

If corrections are completed, and revised Elevation Certificate is received, Current Planning staff ensures the applicant/homeowner received the corrected copy.

(E) How and where are certificates maintained:

All Elevation Certificates and all required construction certificates, as well as all other permit application documentation, shall be stored electronically in the permit database maintained by the Orange County Planning and Inspections Department.

Elevation Certificates are also scanned and made a part of the parcels master file maintained by the Current Planning Department.

Copies of finished-construction Elevation Certificates, along with the other required construction certificates, are placed in both separate paper and electronic folders labeled "Activity 310" maintained in perpetuity by the Current Planning staff (i.e. Floodplain administrator) for CRS purposes.

(F) How certificates are made available: Copies of all Elevation Certificates are available on the County website at:

When a member of the public requests a copy of an Elevation Certificate, the request shall be initiated with Current Planning staff, who shall within 3 business days make a copy of the requested information available to the inquirer. Please note there is no financial charge for this service.

ADDITIONAL INFORMATION – FLOODPLAIN DEVELOPMENT PERMIT REVIEW PROCESS:

With respect to floodplain development permits, the following cadence of review is required:

- i. A floodplain development permit, conforming to the provisions of the Orange County Unified Development Ordinance (hereafter 'the UDO') is required before the commencement of any land disturbance activity, construction, substantial improvement or repairs to a substantially damaged structure for properties located within a floodplain, commonly referred to within the UDO as a Special Flood Hazard Areas (SFHAs).

STAFF COMMENT: In accordance with applicable County floodplain development regulations, development activities within SFHAs are prohibited.

Exception(s) are limited to roadway/utility development, dam/water feature restoration projects, or work on pre-FIRM structures (i.e. structures not classified as substantially damaged) that does not result in the structure being classified as 'substantially improved'.

In those instances where there is land disturbing activity within the SFHA (i.e. roadwork), the County requires a no-rise certification for such projects.

The County also enforces a floodplain buffer, measures from the edge of the 1% annual chance of inundation, be preserved in a natural (i.e. vegetative) state. New fill material is also prohibited within the SFHA.

- ii. Planning and Inspections Department staff have placed notices in the County permit system identifying all parcels containing SFHAs.

STAFF COMMENT: Current Planning staff prepares a 'site assessment map' for development projects outlining development opportunities/constraints. This assessment, utilizing County GIS map data, includes floodplain information (i.e. FIRM Map Panel Number, Community Number, Base Flood Elevation – including freeboard, flood depth at structure – if applicable, required stream/floodplain buffers, etc.).

This map is provided to all property owner/applicants looking to develop property to aid them in understanding their development opportunities and constraints.;

- iii. For all development/permit requests received by the County, Current Planning staff reviews the proposal and in order to determine the lowest adjacent grade of the property where development activity is proposed (i.e. location of structure).

STAFF COMMENT: If this grade is a minimum of five (5) feet or greater above established base flood elevations, as depicted on adopted Federal Insurance Rate Maps (FIRM), the permit is processed and the appropriate elevation information is included in the approval. If

not, then the applicant is required to complete a Floodplain Development Permit Application and follow the procedures described herein.

- iv. In all SFHAs, the following provisions are required. Any alteration, repair, reconstruction, or improvements to a structure shall meet the requirements of "new construction." Permit holders or their contractors shall:
 - a. Anchor substantial improvements or damage repairs to prevent flotation, collapse, or lateral movement of the structure;
 - b. Construct substantial improvements or damage repairs with materials and utility equipment resistant to flood damage;
 - c. Construct substantial improvements or damage repairs using methods and practices that minimize flood damages;
 - d. Design and locate electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities to prevent water from entering or accumulating within the components during conditions of flooding. These include, but are not limited to HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric meter panels/boxes, utility/cable boxes, appliances (washers, dryers, refrigerator, etc.), hot water heaters, and electric outlets/switches;
 - e. Design replacement water supply systems to eliminate infiltration of floodwaters into the system;
 - f. Design replacement sanitary sewage systems to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters;
 - g. Locate and construct on-site waste disposal systems outside the SFHA and the required stream buffer to avoid impairment to them or contamination from them during flooding;
 - h. Not enlarge, replace, or rebuild non-conforming buildings or uses or other development, unless such enlargement or reconstruction conforms to the provisions above. The repair, reconstruction, or replacement of a building or structure existing on March 16, 1981, which is located totally or partially within the floodway non-encroachment area, or stream setback is permitted. The bulk of the building or structure below the regulatory flood protection elevation in the floodway, non-encroachment area, or stream setback cannot be increased and if such repair, reconstruction, or replacement meets all other requirements;
 - i. Not permit new solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities in SFHAs. A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility may be located in a SFHA only if the structure or tank is either elevated or flood proofed to at least the regulatory flood protection elevation and certified as such.

- v. **Floodplain Development Permit Requirements:** To apply for a Floodplain Development Permit, the following information shall be presented to the staff as detailed in Section 2.6.2 of the UDO:
- a. Completed application form;
 - b. A site plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:
 - i. The nature, location, dimensions, and elevations of the area of development/disturbance;
 - ii. existing and proposed structures, driveways, utility systems, grading/pavement areas, fill materials, storage areas, drainage facilities, and other development;
 - iii. The boundary of the SFHA as delineated on the FIRM or other flood map as determined in Section 4.3.5 or a statement that the entire lot is within the SFHA;
 - iv. Flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map as determined in Section 4.3.5 of the UDO;
 - v. The boundary of the floodway(s) or non-encroachment area(s) as determined in Section 4.3.5 of the UDO;
 - vi. The Base Flood Elevation (BFE) where provided as set forth in Section(s) 1.10.2 (K) and (L) ; 4.3.5 ; and 6.6.1 of the UDO;
 - vii. The old and new location of any watercourse that will be altered or relocated as a result of proposed development; and
 - viii. Preparation of the plot plan by or under the direct supervision of a North Carolina licensed professional Land Surveyor or Professional Engineer and certified by them.
 - c. Proposed elevation, and method thereof, of all development within a SFHA including but not limited to:
 - i. Elevation in relation to mean sea level of the proposed reference level (including basement) of all structures;
 - ii. Elevation in relation to mean sea level to which any non-residential structure in Zone AE will be flood-proofed; and
 - iii. Elevation in relation to mean sea level to which any proposed utility systems will be elevated or flood proofed.
 - d. If flood proofing, a flood proofing certificate and back-up plans from a registered professional engineer or architect certifying that the non-residential flood proofed development will meet the flood-proofing criteria in Section 6.6.1 of the UDO.
 - e. A Foundation Plan drawn to scale, which shall include details of the proposed foundation system to ensure all provisions of this Ordinance are met. These details include but are not limited to:

- i. Proposed method of elevation, if applicable (i.e., fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/posts/piers/piles/shear wall); and
 - ii. Openings to facilitate equalization of hydrostatic flood forces on walls according to Section 6.6.1(B), when solid foundation perimeter walls are used in Zones.
- f. Usage details of any enclosed space below the regulatory flood protection elevation;
- g. Plans and/or details for the protection of public utilities and facilities such as sewer, gas, electrical, and water systems to be located and constructed to minimize flood damage;
- h. Copy of all other Local, State and Federal permits required prior to floodplain development permit issuance (i.e. Wetlands, Erosion and Sedimentation Control, Riparian Buffers, Mining, etc.);
- i. If the application is for placement of recreational vehicles and/or temporary structures, documentation to ensure compliance with Section 6.6.1(B)(5) and (7) of the UDO;
- j. If a watercourse is proposed to be altered and/or relocated, a description of the extent of watercourse alteration or relocation, an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map, drawn to scale, (if not shown on plot plan) showing the location of the proposed watercourse alteration or relocation;
- k. As required by Section 2.6.3 of the UDO the following information shall also be provided in order for the project to be deemed compliant with applicable regulations.
 - i. A description of the development under the floodplain development permit issuance;
 - ii. SFHA determination for the proposed development per available data specified in Section 4.3.5 of the UDO;
 - iii. The regulatory flood protection elevation required for the reference level and all attendant utilities;
 - iv. The regulatory flood protection elevation required for the protection of all public utilities;
 - v. All certification submittal requirements with timelines;
 - vi. A statement that no fill material shall encroach into the floodway or non-encroachment area of any watercourse, if applicable;
 - vii. If in an AE zone, specify the minimum foundation opening requirements;
 - viii. State limitations of below BFE enclosure uses (if applicable) such as, parking, building access and limited storage only.

Appropriate staff hereby acknowledge the implementation/adherence to the standard operating/management procedures associated with the submittal/review of Elevation Certificates and all other required floodplain-related construction certificates (i.e. Floodproofing Certificates) as part of Orange County North Carolina Flood Hazard Mitigation Program.



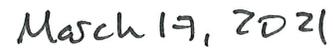
Craig Benedict, Planning Director



Date



Michael D. Harvey Floodplain Administrator



Date



Michael Rettie, Chief Building Official



Date

Activity 320

ORANGE COUNTY, NORTH CAROLINA
COMMUNITY RATING SYSTEM (CRS) RECERTIFICATION – AUGUST 2022
ACTIVITY 320 – MAP INFORMATION SERVICES:

The following documentation denotes the services offered by the County as part of **Activity 320** during the review cycle.

- A. Flood Information is available to the general public through the following:
1. The County's on-line GIS mapping tool, located on the County's main webpage, viewable at: (<https://gis.orangecountync.gov:8443/orangencgis/default.htm>).

Data provided on this map platform includes:

- a. Contour data at 2 and 5 ft. intervals,
 - b. Hydrology (i.e. streams, water features, etc.),
 - c. Floodplains (i.e. Special Flood Hazard Areas) including:
 - i. 100 year floodway (deepest channel)
 - ii. 1% annual chance (i.e. the 100 year flood zone), and
 - iii. 0.2% annual chance (i.e. the 500 year flood zone).
 - d. Flood Insurance Rate Map (FIRM) panel number,
 - e. Soils data,
 - f. Building footprints,
 - g. Zoning layers,
 - h. Etc.
2. The County's in-house GIS mapping tool is maintained by the Department. This is the program used by staff to create Zoning Reports provided to property owners, residents, developers, insurance agents, etc. Data provided on these Zoning Reports includes:
 - a. Contour data at 2 intervals,
 - b. Hydrology (i.e. streams, water features, etc.),
 - c. Floodplains (i.e. Special Flood Hazard Areas) including:
 - i. 100 year floodway (deepest channel)
 - ii. 1% annual chance (i.e. the 100 year flood zone), and
 - iii. 0.2% annual chance (i.e. the 500 year flood zone).
 - d. Soils data,
 - e. Stream and floodplain buffer(s),
 - f. Zoning layers,
 - g. Etc.

In 2012 the Current Planning Department created a standardized Zoning Report map in an effort to identify environmental conditions that may restrict the overall development of property. Data provided on the Zoning Report maps includes, but is not limited to:

- i. Location of streams or protected water features,
- ii. Required stream buffers, including buffers from identified SFHA,
- iii. Required minimum setbacks for structures from property lines,
- iv. Applicable FIRM Community, Map, and Panel Number for the property,
- v. Location of floodplain and required base flood elevation requirements for the property (including County enforced freeboard requirement),
- vi. Flood depth data for a structure (if applicable),
- vii. Impervious surface limits for the property,
- viii. Erosion Control and Stormwater management land disturbance thresholds, specifically focusing on identifying if an erosion control permit or a stormwater management plan will be required based on the anticipated/proposed level of land disturbance,
- ix. The presence of conservation or utility easements impacting the location of structure and/or utility systems (i.e. well and septic),
- x. Etc.

Staff has included a sample Zoning Report illustrating the service provided.

As part of the services offered by the County when a parcel is encumbered by the SFHA the following information is provided:

- The FIRM zone(s) located on the property;
- The FIRM Map information for the property (i.e. community number, panel number, date of map, etc.);
- The base flood elevation including the County's 2 ft. freeboard requirement; and
- The flood depth at structure (if applicable).

Staff recommends property owner's whose property is encumbered by floodplain consult with a surveyor and review the need for an elevation certificate to ensure development will comply with established flood regulations. A copy of the elevation certificate application is available at the front counter and on-line at:

<http://www.co.orange.nc.us/1325/Floodplain-Management>

Staff also works with the property owner using mapping data to identify areas of the property where structure(s) would comply with base flood elevation standards (i.e. using the existing contour data for the parcel as detailed on the Zoning Report).

During this initial meeting staff provides information on the mandatory purchase of flood insurance using existing brochures and handouts, a copy of which is provided under **Activity 330**. Further staff provides an informational brochure on the natural function and importance of a floodplain.

- B. The County continues to maintain and provide numerous information handouts and brochures detailing our flood program and the various services offered to interested parties with respect to providing assistance on obtaining floodway data, depth of flooding, and location of wetlands.

The main brochure outlining the various mapping/floodplain development services offered by the Department has been included with applicable section(s) highlighted for your edification. flood brochure has been provided incorporating your comment(s)/suggested modification(s), specifically including references to providing assistance on floodway data, depth of flooding, and location of wetlands.

- C. Staff has included the map/information log for the 2021/22 review cycle.

NOTE: Information is limited in this regard due to dramatic staff turnover and loss of clear data transfers throughout the re-staffing process over the last year. We have provided a log of our constituent inquiries that is limited to January 2022 and thereafter. Unfortunately we had no official staff in the office tasked with tracking inquiry logs from August 2021 to January 2022. Staff is only aware of one (1) constituent who went through an inquiry/Floodplain Development permitting process within this current review cycle. A copy of the Floodplain Development Permit letter for that project has been included in this submittal.

- D. Staff sends out several notices to property owners impacted by Special Flood Hazard Areas as well as local realtors, surveyors, and engineers on the services the County offers with respect to administration and enforcement of flood damage prevention regulations. Copies of these letters are provided under **Activity 330**. Within the Audit report under this category (i.e. Activity 330), staff has provided sample letters and the mailing labels used to send the annual mailer.

- E. The following constitutes the standard operating procedure observed by the Department with respect to the maintenance FIRM maps and floodplain data:

The County's FIRM maps/data have been incorporated onto the Official Zoning Atlas as the Special Flood Hazard Area (SFHA) Overlay District. This data is also available as part of our GIS mapping database, which is used on a daily basis to create maps for local property owners

detailing the development opportunities/constraints on a given parcel of property.

County Planning staff completes an assessment every 3 months, 4 times a year, to ascertain if conditions have changed warranting an update. This is due to the fact our FIRM map data corresponds to the aforementioned overlay district denoted on our Official Zoning Atlas.

Any change in FIRM maps requires the formal amendment of the County Zoning Atlas to modify the boundaries of the SFHA Overlay District as detailed in Article 2 of the Unified Development Ordinance.

With respect to specific issues, the following represents the County's standard operating procedure:

- 1. Annexation(s): The County enjoys a highly cooperative working relationship with local municipalities. To this end various agreements have been adopted establishing specific rules of procedure designed to manage growth outside of municipal corporate limits.*

In most instances the County and local municipality have developed a joint land use plan identifying areas intended for annexation and/or extension of extraterritorial jurisdictional (ETJ) boundaries. This is so both parties can prepare in advance for the eventual assumption land management responsibilities.

In the event of an annexation and/or extension of ETJ the County's Official Zoning Atlas is modified concurrently to correctly denote the area in question is no longer subject to our regulatory standards. This includes identification of properties encumbered by SFHA. When an area is removed from the County's jurisdiction all applicable permit history on the property is transferred to the municipality for their use.

- 2. Subdivisions: When a subdivision is proposed current regulatory standards (see Article 7) requires that SFHAs are placed in dedicated open space. No development activity (i.e. habitable structure) is permitted within the SFHA.*

The recorded final plat denotes the identified SFHA areas and labels them as being preserved open space area. Once a subdivision plat is recorded, and our GIS database is updated with the new lots, the SFHA appears as being located within

an open space lot whose development is restricted by the subdivision approval.

3. *LOMAs/Map Revisions/Re-studies: Once informed of a potential map revision, the County will complete its own internal analysis and await the results.*

We typically 'flag' potentially impacted parcels in our permitting system of the possible flood data modification. This is so any development proposals are reviewed under the guise of a potential floodplain modification. While we have to use 'best available data' we offer the available options to the property owner.

If the FIRMs are altered we initiate the formal process to modify our zoning atlas and GIS database to incorporate the modification.

- F. Included within this summary is a log of local floodplain map inquiries. It needs to be remembered the County provides floodplain map information on all Zoning Reports (sample contained herein) as a general mapping service when questions on the development opportunities/constraints of a given property are received by the general public.

Site Data: **Sample Zoning Report - Activity 320 (2022)**

Zoning: Agricultural Residential (AR)
 Acreage: 10 acres
 Overlay Districts: Little River Protected Watershed Protection Overlay District

Plat/Legal Description: Lot 9 Phase 1 - Cascades (PB 44 / PG 136)
 Other:

Zoning Requirements:
 Max. Density: 1 unit for every 2 acres of property (Watershed Overlay)

Min. Lot Size: 40,000 sq.ft.
 Min. lot width: 150 ft.
 Maximum height: 25 ft.

Building Setbacks:
 Front (and Corner lots) = 40 ft. from property line/edge of right-of-way
 Side Setbacks = 20 ft.
 Rear Yard Setback = 20 ft.

FAR: N/A
 Max. Impervious Surface: 6% or 26,136 sq.ft. (10 acre lot)
 Open Space: N/A

Environmental Features:
 Streams/Water Bodies: There are streams on the property
 SFHA(Floodplain): Property is encumbered by floodplain
 Wetlands: Based on available data there are wetlands on the property
 Buffers: SFHA: 80 ft. Stream: 80 ft. Water Body: 80 ft. (wetlands)

Flood Info:
 Community #: 370342
 Panel #: 9886 Suffix #: K
 Map Number: 3710988600K
 Effective Date: 11/17/2017
 Floodway data: AE - Floodway ; AE 1% annual chance of inundation
 BFE: 567.5 ft. with Freeboards: 569.5 ft.
 Flood depth at structure: N/A (structure is at an elevation of 595 ft. based on contour data)

Land Disturbance Thresholds:
 1) Erosion Control Application/Permit required if disturbing more than 20,000 sq. ft.
 2) Stormwater Management Application/Permit required if disturbing more than 21,780 sq. ft. (half an acre) for residential structures.

*** Call OC Erosion Control at (919) 245-2586 for more information.

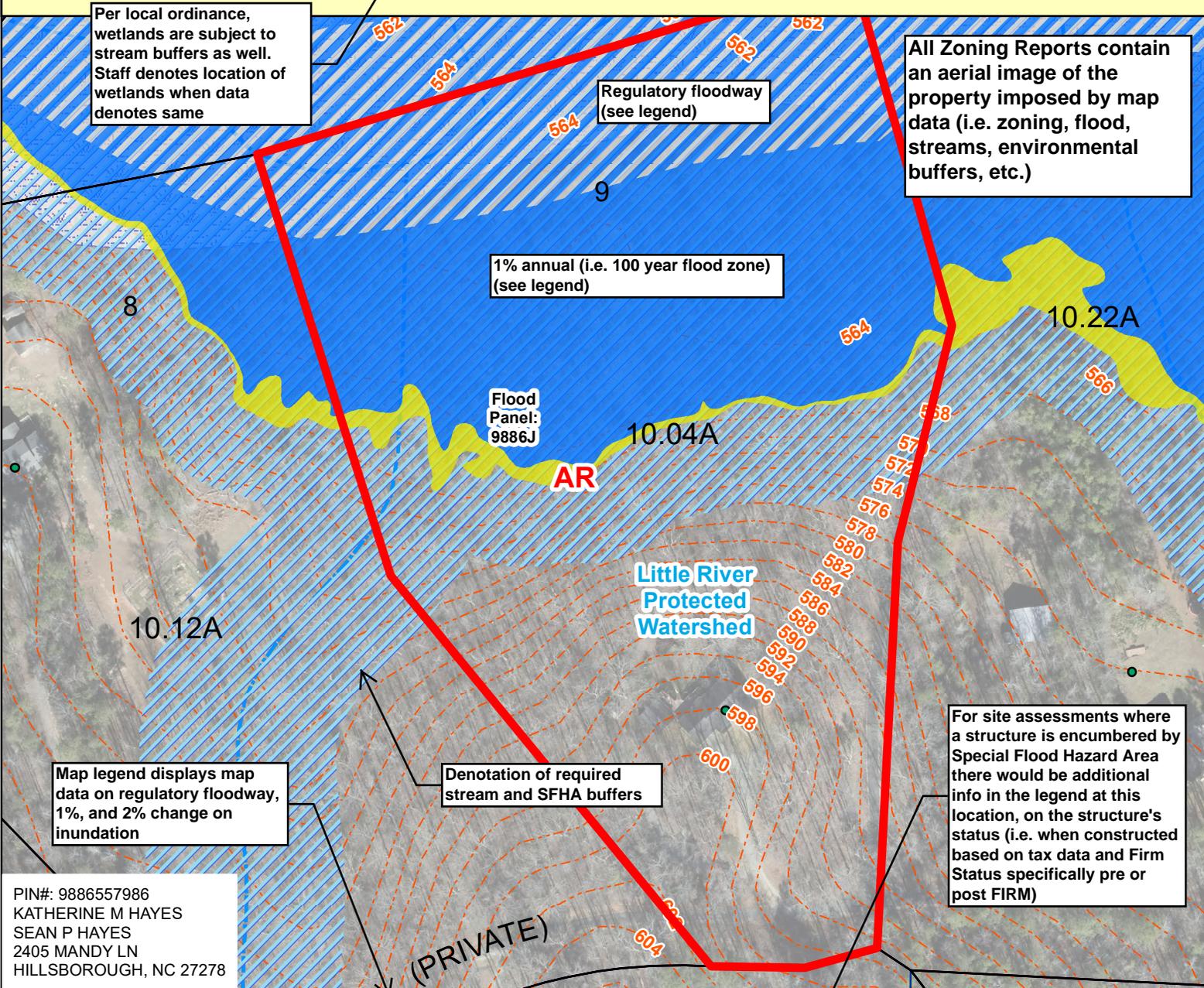
Notes:
 1) Private Road Justifications, Recorded Declarations, Restrictive Covenants, Bona Fide Farm status, use and building type (e.g. duplex units) will change subdivision and development requirements.

2) Wetlands data is taken from Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service and does not constitute a formal delineation (i.e. survey) of the property. All wetland areas are approximate.

3) Flood boundaries are subject to change based on periodic amendments to flood maps. Determination is based on current, best available, data.

4) This does not constitute a formal land survey.

(Date Site Assessment Completed: 3/31/2021 by mharvey)



Map legend displays map data on regulatory floodway, 1%, and 2% change on inundation

Denotation of required stream and SFHA buffers

For site assessments where a structure is encumbered by Special Flood Hazard Area there would be additional info in the legend at this location, on the structure's status (i.e. when constructed based on tax data and Firm Status specifically pre or post FIRM)

Legend denotes all available flood information for the parcel of focus

Contour data is provided on all Zoning Reports

Map legend:

- Parcels
- Regulatory floodway
- 1% Annual Chance of Flooding (Previously referred to as the 100-year flood zone)
- 0.2% Annual Chance of Flooding (Previously referred to as the 500-year flood zone)
- USGS Stream
- Soils Survey Stream
- Zoning
- Watershed
- 2' Contours (NCDOT)
- Addresses
- Active

Scale: 1 in = 150 ft

Scale bar: 0, 80, 160, 320 Feet

North arrow

Seal of Orange County, North Carolina

FIRM Map Information

Flood Development Information (i.e. BFE, BFE with Freeboard, Flood Depth at structure)

Flood depth at structure (if applicable)

Per local ordinance, wetlands are subject to stream buffers as well. Staff denotes location of wetlands when data denotes same

All Zoning Reports contain an aerial image of the property imposed by map data (i.e. zoning, flood, streams, environmental buffers, etc.)

1% annual (i.e. 100 year flood zone) (see legend)

Flood Panel: 9886J

AR

Little River Protected Watershed

(PRIVATE)

Addresses

- Active

PLANNING & INSPECTIONS DEPARTMENT

Craig N. Benedict, AICP, Director

**Current Planning
(919) 245-2575
(919) 644-3002 (FAX)
www.orangecountync.gov**



**131 W. Margaret Lane
Suite 201
P. O. Box 8181
Hillsborough, NC 27278**



September 3, 2021

Bruce Fulford
5622 Old Cherokee Ln
Saxapahaw, NC 27340

Nancy Bryson
7923 MORROW MILL RD
Chapel Hill, NC 27516

RE: FLOODPLAIN DEVELOPMENT PERMIT DETERMINATION – Elevation and renovation of existing residential structure at:

7923 MORROW MILL RD (PIN 9729334052)

FDP21-0002 / CB21-1645

NOTICE OF FLOODPLAIN DEVELOPMENT APPROVAL – WITH CONDITIONS

To Whom It May Concern:

Orange County is in receipt of a Building Permit (BP) and a Floodplain Development Permit (FDP) proposing the renovation and elevation of an existing structure within the Bingham Township of Orange County.

Specifically, Nancy Bryson (hereafter 'the Applicant') proposes to complete interior and exterior renovations of an existing residential structure, including elevation of said structure in an effort to address compliance with applicable Orange County Floodplain Management standards (hereafter 'the Project'). The Project has been assigned building permit case number of CB21-1645 and floodplain development permit case number of FDP21-0002.

Proposed activity is occurring within identified/defined Special Flood Hazard Area (SFHA) according to a FEMA Flood Insurance Study (FIS) involving work for 7923 Morrow Mill Road, an 18 acre parcel further identified utilizing Orange County Parcel Identification Number (PIN) 9729-33-4052 zoned Agricultural Residential (AR) (hereafter 'the Property').

The SFHA impacting/encumbering the Property are denoted on Federal Insurance Rate Maps (FIRM) number 3710972900L panel 9729 with an effective date of November 17, 2017. The existing structure is located within an AE flood zone, with the flood source being Cane Creek North, with a base flood elevation of 428.5 ft. As a

general reminder, Orange County enforced a 2-ft. freeboard requirement meaning the effective base flood elevation for the Property is 430.5 ft.

Because of the parcel(s) location with the SFHA, the Project is required to demonstrate compliance with established flood regulations as embodied within the Orange County Unified Development Ordinance (UDO). The County also has regulations requiring the protection of the natural areas around water features (i.e. stream buffers) regulations as detailed within Section 6.13 of the UDO.

Staff is in receipt of a FDP, including an elevation certificate denoting the existing elevation of the structure as well as a no rise flood study completed by the Timmons Group, for the Project.

This letter only focuses on local (i.e. Orange County) floodplain management-permitting standards and does not presume to identify requirements associated with any other permitting process.

Upon review of the FDP, staff offers the following comments:

1. The request has been submitted in accordance with the provisions of Section 2.6.2 *Floodplain Development Permit and Certificate Requirements – Plans and Application Requirements* of the UDO;
2. The structure, built in approximately 1932 according to County tax records, predates the adoption/enforcement of applicable floodplain regulations, stream and floodplain buffers;
3. According to submitted documentation, there will be no expansion of the existing development footprint increasing the structures degree of non-conformity with respect to enforcement of stream and/or floodplain buffers. As a result, staff has determined the project will comply with Section 6.13.6 *Stream Buffers – Uses Allowable Within Stream Buffers* of the UDO as development activity will not result in an increase in existing non-conformity;

STAFF COMMENT: Staff is finalizing a Stream Buffer Authorization request in concert with the Project.

4. Per Section 6.21.5 (A) (13) of the UDO, new fill material within the SFHA is prohibited;

STAFF COMMENT: The Project does not involve the use of fill material. The submitted no rise flood study indicates the elevation of the structure will not result in an increase in flood levels for the area.

5. Per Section 6.21.5 (A) (14) of the UDO, grading activities are prohibited within the SFHA.

STAFF COMMENT: According to the FDP, grading activities will be limited to those portions of the Project requiring the deconstruction/temporary removal allowing for the elevation of the structure.

There does not appear to be any alteration of existing grade or the 'mass grading' of property to accommodate the Project.

6. Per Section 6.21.5 (B) (1) of the UDO, substantial improvement of existing residential structures shall require elevation of the structure, including utilities, to established flood protection elevations. In this case, the required elevation for the structure will be 430.5 ft.;

STAFF COMMENT: Language within the submittal indicates habitable living area and utilities, including HVAC ducting, will meet the County's established elevation requirement(s).

7. Per Section 6.21.5 (B) (1) (c) of the UDO, should solid foundation perimeter walls be used to elevate a structure, openings sufficient to automatically facilitate equalization of hydrostatic flood forces on exterior walls shall be provided.

Based on the submitted documentation, and in accordance with Section 2.6.2 of the UDO, staff hereby **Approves with Conditions** the FDP for the Project subject to the following condition(s):

- A. Consistent with the submitted application, use of fill material is expressly prohibited;

- B. Mass grading of the Property is expressly prohibited.

The only approved grading activity is associated with installing required infrastructure to support the elevation of the existing structure;

- C. A revised/updated elevation certificate shall be required once the structure is elevated documenting compliance with the 430.5 ft. base flood elevation requirement (note this number includes the County's freeboard requirement);

NOTE: Elevation includes first floor of habitable living space and utilities including any existing/proposed duct work.

- D. Appropriate flood openings shall be installed within solid foundation perimeter walls consistent with the requirements of Section(s) 6.21.5 (B) (1) (c) and 2.6.3 of the UDO;

- E. Applicant shall schedule an inspection with the County Floodplain Administrator once elevation of the house has been completed;

- F. Applicant shall schedule an inspection to review the revised elevation certificate on-site prior to the issuance of a Certificate of Compliance for permit CB21-1645.

Please note land disturbing/development activities shall only be permitted to commence once **all other required permitting processes** have been adhered to. The issuance of the FDP merely signifies the Project complies with applicable floodplain management regulations.

The Orange County Planning department looks forward to continue working with you on this project. Please contact staff at (919) 245-2575 for additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael D. Harvey". The signature is fluid and cursive, with a large initial "M" and "H".

Michael D. Harvey AICP, CFO, CZO
Current Planning Supervisor
Orange County

CC: Craig Benedict, Planning Director
Patrick Mallett, Erosion Control
Michael Rettie, Inspections
James Bryan, Staff Attorney
File

FLOOD SAFETY:

Here are some tips to remember during flood conditions:

1. **Do not walk through flowing water.** Drowning is the number one cause of flood deaths, mostly during flash floods. Currents can be deceptive. If you walk in standing water, use a pole or stick to ensure that the ground is still there;
2. **Do not drive through a flooded area.** More people drown in their cars than anywhere else;
3. **Stay away from power lines and electrical wires.** The number two flood killer after drowning is electrocution. Electrical current can travel through water. Report downed power lines to the Piedmont Electric or Duke Power and to the County Emergency Management office;
4. **Have your electricity turned off by the utility company.** Some appliances, such as television sets, keep electrical charges even after they have been unplugged. Do not use appliances or motors that have gotten wet unless they have been taken apart, cleaned, and dried;
5. **Look out for animals, especially snakes.** Small animals that have been flooded out of their homes may seek shelter in yours. Use a pole or stick to poke and turn things over and scare away small animals;
6. **Look before you step.** After a flood, the ground and floors are covered with debris including broken bottles and nails. Floors and stairs that have been covered with mud can be very slippery;
7. **Be alert for gas leaks.** Use a flashlight to inspect for damage. Do not smoke or use candles, lanterns, or an open flame unless you know the gas has been turned off and the area has been ventilated;
8. **Develop an emergency flood event checklist** You may not receive much of a warning when a flood event hits, so develop a detailed checklist prepared in advance would help ensure that you will not forget anything. This would include shutting of gas lines, unplugging non-essential electrical items, an emergency food/medicine kit, etc.

WE NEED YOUR ASSISTANCE:

Here are some helpful steps that can be taken by citizens to offset the potential damage created during flood events:

1. **Help protect the natural functions of a floodplain:** Do not dump or throw anything into the ditches or streams.

Even grass clippings and branches can accumulate and plug channels and culverts. A plugged channel cannot carry water and when it rains the water has to go somewhere. Every piece of debris contributes to flooding somewhere downstream. **If your property is next to a ditch or stream, please do your part and keep the stream channel and banks clear of trash, brush and debris.**

2. If you see others dumping trash, debris, or even yard waste in a ditch or stream please report it to us at 919 245 2575;
3. Always check with the Building Division before you build on, alter, regrade, or fill on your property. A permit may be required to ensure that projects do not cause flood problems on other properties;
4. If you see building or filling without a County building permit posted, contact us at 919 245 2575 as quickly as possible;
5. If you see broken silt fencing on a construction site contact us at 919 245 2575 as quickly as possible. Silt fencing is valuable in helping to prevent soil/sediment from running into our streams;
6. Remember: the County maintains an electronic library of information on flood proofing, flood insurance and flood safety, which can be accessed at:

<https://www.co.orange.nc.us/1309/Floodplain-Information>.

Staff is also available for consultations as needed.

For more information on the County's floodplain program you may use the following web link:

<https://www.co.orange.nc.us/1309/Floodplain-Information>.

Or contact us at:
PHONE (919) 245-2575
FAX: (919) 644-3002

E-mail: csandt@orangecountync.gov

FLOOD ISSUES:

Understanding Orange County Services



**ORANGE COUNTY
PLANNING AND INSPECTIONS
DEPARTMENT -
Current Planning Division**

FLOOD EVENTS HAPPEN HERE

It may be hard to believe but flooding can occur within the Piedmont region of North Carolina and Orange County is certainly not immune.

Floods are dangerous. Moving water as shallow as two feet can knock a grown man off his feet and float a car.

For those properties that contain identified flood prone areas, property owners should taken additional precautions to avoid the negative impacts that can be generated during a storm event. While you may not be able to plan for every contingency, there are certain steps that you can take to negate the potential impact flooding can have on your property.

PLANNING CAN HELP!

Orange County Planning can assist you in addressing potential flood issues on your property including:

1. Determining the location of flood plain/special flood hazard areas/floodways on your property including the provision of the necessary information found on the Flood Insurance Rate Map (FIRM) needed to complete a flood insurance policy;
2. Determining and denoting required floodplain buffers on your property;
3. Determining the approximate depth of flooding on your property (i.e. how deep flood waters can be anticipated to be) in order to provide you with a better concept of the property's potential flood hazard;
4. Providing electronic copies of flood maps and other similar data denoting flood prone areas on your property;
5. Providing assistance in determining the location of a specific structures elevation within a floodplain and provide you assistance on obtaining an elevation certificate;
6. Providing the location of water/drainage features on a parcel of property in an effort to work with you to preserve their natural drainage functions; and
7. Providing you with available mapping data denoting the location of wetlands on your property.

This information is available on what we refers to as a 'Site Assessment'. There is no charge for this service and no appointment is necessary. Maps can be completed in about 20 minutes by staff during normal business hours.

ADDITIONAL SERVICES:

In addition to the mapping services detailed above, Planning staff is also available for the following:

- Completion of complementary site visits to review your specific situation,
- Preparation of documents detailing specific advice/options on ways to protect your property (i.e. retrofitting/flood proofing of structures, drainage improvements, etc.), and
- Review of any and all available financial assistance programs to assist with development/redevelopment activities.

WHAT YOU SHOULD DO WHEN CONSIDERING CONSTRUCTION:

If you are thinking about building on your property, you should first consult with the Planning Department. Upon your request, staff members can visit your property to discuss your specific flood issues and explore opportunities to either correct or negate the situation with the goal of preventing damage as the result of flooding.

Flood Proofing: There are several different ways to protect a building from potential flood damage, including:

1. With respect to new construction, have the structure elevated above the base flood elevation to ensure it will not be inundated during flood events or install flood vents to allow for floodwaters to pass under a structure,
2. The grading (new development) or re-grading your property outside of the floodplain and protected stream buffers to channel water away from a structure,
3. Retrofit the existing crawl spaces under a residence by installing hydrostatic vents around the base of the structure.. Hydrostatic pressure from floodwaters is a major cause of damages to residences. These vents serve to equalize the pressures on the walls by allowing floodwaters to move freely both into and out of the crawl space. This option will, however, require the relocation of electrical equipment and HVAC systems.
4. Where practical, existing structures could be elevated above the base flood elevation. While potentially expensive, this option may be best suited to avoid future damage to a structure resulting from flood events.

Please note that any alteration to any building located on the property, or any alteration to your property in general, will require a permit from the Planning and Inspections Department before the commencement of work. Staff will be more than happy to assist you through the permit application and approval process and offer guidance on various options as detailed herein.

BUY FLOOD INSURANCE:

If you do not have flood insurance, the County strongly encourages you to talk with your insurance agent in order to understand the potential benefits of flood coverage.

Homeowner's insurance policies do not cover damage from flooding. As Orange County is a participant in the National Flood Insurance Program, you can purchase a separate flood insurance policy for your property. This insurance is backed by the federal government and is available to everyone, even for properties that have been flooded before.

Some people have purchased flood insurance because the bank required it when they got a mortgage or home improvement loan. Usually these policies just cover the building's structure and not the contents. During the kind of flooding that happens here in Orange County, the furniture and house contents can also be damaged.

At present there are approximately 70 flood insurance policies in effect throughout the unincorporated portions of Orange County. If you are covered, double check that the building coverage is adequate and make sure you have content coverage. Even if you think you have covered all your bases flood-wise, the next flood could be worse than Hurricane Fran was in 1996. Flood insurance covers all surface flooding.

Please do not wait to the next hurricane to buy flood insurance. There is a thirty-day waiting period before the policy takes effect. Contact your insurance agent for more information on rates and coverage.

BUILD RESPONSIBLY:

Before engaging in development activity, consult with the Planning Department to understand development opportunities and constraints for your property. As a reminder, the County prohibits development activity within identified Special Flood Hazard Areas (including placement of fill material and/or grading activities).

Also as you are finalizing proposed grading activities, staff encourages property owners to maintain natural grade within required setback areas (i.e. 40 ft. from a front property line and 20 ft. from side/rear property lines) to preserve existing drainage patterns.

The County Inspections Department enforces State building code requirement(s) requiring positive drainage away from residential/non-residential structures as part of the construction process.

Tracking Log of Floodplain-Related Inquiries by Orange County Residents
August 1, 2021 through August 1, 2022*

**Due to staffing shortages in late-2022, we were unable to locate a tracking lot for August 1, 2021 through February 11, 2022*

DATE	TYPE	PIN	ADDRESS	MAP NUMBER	BFE * Includes freeboard	FLOODWAY DATA	APPROXIMATE DEPTH OF FLOODING	INSURANCE INFORMATION PROVIDED (y / n)	REPETIVE LOSS PROPERTY (y / n)	WETLANDS (y / n)	NOTES	SITE ASSESSMENT COMPLETED (y / n)
2/11/2022	Phone	9860018537	1601 DAIRYLAND RD			1% Annual Chance of Flooding (Prior 100 Year Floodway) Regulatory Floodway 0.2% Annual Chance of Flooding (Prior 500 Year Floodplain)	N/A	N	N	N	"There is a Creek in a flood plain. So we're trying to answer the question of whether or not another home or subdivision can occur"	Y
4/27/2022	Email	9868617308	N/A			1% Annual Chance of Flooding (Prior 100 Year Floodway)	N/A	N	N	N	I'm looking into buying a property and I have a few questions about it.	Y
7/12/2022	email	9875648222	N/A			AE (1% annual) 1% Annual Chance of Flooding (Prior 100 Year Floodway) Regulatory Floodway 0.2% Annual Chance of Flooding (Prior 500 Year Floodplain)	N/A	N	N	N	I'm looking for the steam buffer for Stroud Creek located off Miller Rd.	Y
7/25/2022	phone	9867689900	N/A			1% Annual Chance of Flooding (Prior 100 Year Floodway)	N/A	N	N	N	Wanted to see requirements for building a driveway to access rear or property.	N

Activity 330

ORANGE COUNTY, NORTH CAROLINA
COMMUNITY RATING SYSTEM (CRS) RECERTIFICATION – AUGUST 2022
ACTIVITY 330 – MAP INFORMATION SERVICES:

The County engages in the following community outreach:

1. A letter to property owners with existing flood insurance reminding them of our participation in the CRS program and encouraging them to review their current policy with their insurance carrier. Typically, these letters go out in the last week of July of each calendar year. Due to staffing shortages, the letters for this reporting period will be sent out in the first week of August 2022. Approximately 75 letters will be sent out.

Staff includes the County's flood brochure as an additional means of providing information on the services we offer to address compliance with flood regulations.

As reported in past years, there are approximately 45 houses within the County that have some 'involvement' within the SFHA (i.e. the 100-year and/or 500-year floodplains).

2. A courtesy letter sent out to:
 - a. Property owners whose property is encumbered by identified floodplains,
 - b. Local realtors, insurance agents, developers, and surveyors who provide service to County property owners,

informing them of the services offered by the County with respect to floodplain development, and providing 'tips' on what they can do to either mitigate flood damage on their property or simple steps they can take to ensure their safety during a flood event.

Again, these letters typically go out in the last week of July of each calendar year; however, this year we will be sending them out during the first week of August 2022. Approximately 2,100 letters will be send out.

This letter also includes information a service offered by the County, specifically the completion of a Zoning Report. This assessment, which utilizes Orange County Geographic Information Service (GIS) data, is intended to identify environmental conditions that may restrict the overall development of property. Data provided on this assessment includes, but are not limited to:

- a. Location of streams,
- b. Required stream buffers,

- c. Required minimum setbacks for structures from property lines,
- d. Location of floodplain and required base flood elevation requirements,
- e. Impervious surface limits for the property,
- f. Erosion Control and Stormwater management land disturbance thresholds, specifically focusing on identifying if an erosion control permit or a stormwater management plan will be required based on the anticipated/proposed level of land disturbance,
- g. The presence of conservation or utility easements impacting the location of structure and/or utility systems (i.e. well and septic), and
- h. Soil types on the property

Staff attached the County's flood brochure and a 'Top Ten Facts' sheet to this letter as an additional means of providing information on the services we offer to address compliance with flood regulations as well as facts on obtaining flood insurance.

- 3. Staff has a comprehensive set of brochures and information packets providing information on our flood management program, compliance with flood regulations, and the importance of flood insurance. Many of these documents are also linked on the County website at:

<http://www.co.orange.nc.us/1311/Additional-Resources>

Copies of brochures and handouts are contained herein and include the following:

- a. Orange County Brochure – Understanding County Services
- b. FEMA – Flood Insurance Requirements for Recipients of Federal Disaster Assistance
- c. FEMA – Reducing Flood Losses Through the International Codes
- d. FEMA – Homeowner's Guide to Retrofitting
- e. FEMA – Building Science for Disaster-Resistant Communities: Wind Hazard Publications
- f. FEMA and American Red Cross – Preparing for Disaster
- g. NFIP – FloodSmart.gov – Know Your Risk
- h. FEMA – Openings in Foundation Walls and Walls of Enclosures
- i. FEMA – Comparison of Select NFIP and Building Code Requirements for Special Flood Hazard Areas
- j. FEMA – Reducing Flood Risk to Residential Buildings that Cannot be Elevated

- k. NFIP – Top Ten Facts Every Insurance Agent Needs to Know about the NFIP
 - l. FEMA – Summary of Coverage
 - m. FEMA – Benefits of Flood Insurance Versus Disaster Assistance
 - n. FEMA – Questions and Answers about Flood Insurance for Real Estate Professionals
 - o. FEMA – NFIP – Help Protect Your Customer’s New Home
 - p. FEMA – Insurance Agent’s Lowest Floor Guide
 - q. FEMA – Elevation Certificate and Instructions
 - r. FEMA – Flood Plain Management Bulletin – Elevation Certificate
 - s. FEMA – The 100 Year Flood Myth
 - t. Handout/Fact Sheet – About the Mandatory Purchase of Flood Insurance
4. Staff also has the following FEMA documents available for the public to review at the Planning office, the County library located at 137 West Margaret Lane in downtown Hillsborough, and on the County website at: <http://www.co.orange.nc.us/1311/Additional-Resources>.
- a. FEMA - Homeowner’s Guide to Retrofitting - Six Ways to Protect Your Home From Flooding
 - b. FEMA - Protecting Manufactured Homes from Floods and Other Hazards - A Multi-Hazard Foundation and Installation Guide
 - c. FEMA – Floodproofing Non-Residential Buildings

FLOOD SAFETY:

Here are some tips to remember during flood conditions:

1. **Do not walk through flowing water.** Drowning is the number one cause of flood deaths, mostly during flash floods. Currents can be deceptive. If you walk in standing water, use a pole or stick to ensure that the ground is still there;
2. **Do not drive through a flooded area.** More people drown in their cars than anywhere else;
3. **Stay away from power lines and electrical wires.** The number two flood killer after drowning is electrocution. Electrical current can travel through water. Report downed power lines to the Piedmont Electric or Duke Power and to the County Emergency Management office;
4. **Have your electricity turned off by the utility company.** Some appliances, such as television sets, keep electrical charges even after they have been unplugged. Do not use appliances or motors that have gotten wet unless they have been taken apart, cleaned, and dried;
5. **Look out for animals, especially snakes.** Small animals that have been flooded out of their homes may seek shelter in yours. Use a pole or stick to poke and turn things over and scare away small animals;
6. **Look before you step.** After a flood, the ground and floors are covered with debris including broken bottles and nails. Floors and stairs that have been covered with mud can be very slippery;
7. **Be alert for gas leaks.** Use a flashlight to inspect for damage. Do not smoke or use candles, lanterns, or an open flame unless you know the gas has been turned off and the area has been ventilated;
8. **Develop an emergency flood event checklist** You may not receive much of a warning when a flood event hits, so develop a detailed checklist prepared in advance would help ensure that you will not forget anything. This would include shutting of gas lines, unplugging non-essential electrical items, an emergency food/medicine kit, etc.

WE NEED YOUR ASSISTANCE:

Here are some helpful steps that can be taken by citizens to offset the potential damage created during flood events:

1. **Help protect the natural functions of a floodplain:** Do not dump or throw anything into the ditches or streams.

Even grass clippings and branches can accumulate and plug channels and culverts. A plugged channel cannot carry water and when it rains the water has to go somewhere. Every piece of debris contributes to flooding somewhere downstream. **If your property is next to a ditch or stream, please do your part and keep the stream channel and banks clear of trash, brush and debris.**

2. If you see others dumping trash, debris, or even yard waste in a ditch or stream please report it to us at 919 245 2575;
3. Always check with the Building Division before you build on, alter, regrade, or fill on your property. A permit may be required to ensure that projects do not cause flood problems on other properties;
4. If you see building or filling without a County building permit posted, contact us at 919 245 2575 as quickly as possible;
5. If you see broken silt fencing on a construction site contact us at 919 245 2575 as quickly as possible. Silt fencing is valuable in helping to prevent soil/sediment from running into our streams;
6. Remember: the County maintains an electronic library of information on flood proofing, flood insurance and flood safety, which can be accessed at:

<https://www.co.orange.nc.us/1309/Floodplain-Information>.

Staff is also available for consultations as needed.

For more information on the County's floodplain program you may use the following web link:

<https://www.co.orange.nc.us/1309/Floodplain-Information>.

Or contact us at:
PHONE (919) 245-2575
FAX: (919) 644-3002

E-mail: csandt@orangecountync.gov

FLOOD ISSUES:

Understanding Orange County Services



**ORANGE COUNTY
PLANNING AND INSPECTIONS
DEPARTMENT -
Current Planning Division**

FLOOD EVENTS HAPPEN HERE

It may be hard to believe but flooding can occur within the Piedmont region of North Carolina and Orange County is certainly not immune.

Floods are dangerous. Moving water as shallow as two feet can knock a grown man off his feet and float a car.

For those properties that contain identified flood prone areas, property owners should taken additional precautions to avoid the negative impacts that can be generated during a storm event. While you may not be able to plan for every contingency, there are certain steps that you can take to negate the potential impact flooding can have on your property.

PLANNING CAN HELP!

Orange County Planning can assist you in addressing potential flood issues on your property including:

1. Determining the location of flood plain/special flood hazard areas/floodways on your property including the provision of the necessary information found on the Flood Insurance Rate Map (FIRM) needed to complete a flood insurance policy;
2. Determining and denoting required floodplain buffers on your property;
3. Determining the approximate depth of flooding on your property (i.e. how deep flood waters can be anticipated to be) in order to provide you with a better concept of the property's potential flood hazard;
4. Providing electronic copies of flood maps and other similar data denoting flood prone areas on your property;
5. Providing assistance in determining the location of a specific structures elevation within a floodplain and provide you assistance on obtaining an elevation certificate;
6. Providing the location of water/drainage features on a parcel of property in an effort to work with you to preserve their natural drainage functions; and
7. Providing you with available mapping data denoting the location of wetlands on your property.

This information is available on what we refers to as a 'Site Assessment'. There is no charge for this service and no appointment is necessary. Maps can be completed in about 20 minutes by staff during normal business hours.

ADDITIONAL SERVICES:

In addition to the mapping services detailed above, Planning staff is also available for the following:

- Completion of complementary site visits to review your specific situation,
- Preparation of documents detailing specific advice/options on ways to protect your property (i.e. retrofitting/flood proofing of structures, drainage improvements, etc.), and
- Review of any and all available financial assistance programs to assist with development/redevelopment activities.

WHAT YOU SHOULD DO WHEN CONSIDERING CONSTRUCTION:

If you are thinking about building on your property, you should first consult with the Planning Department. Upon your request, staff members can visit your property to discuss your specific flood issues and explore opportunities to either correct or negate the situation with the goal of preventing damage as the result of flooding.

Flood Proofing: There are several different ways to protect a building from potential flood damage, including:

1. With respect to new construction, have the structure elevated above the base flood elevation to ensure it will not be inundated during flood events or install flood vents to allow for floodwaters to pass under a structure,
2. The grading (new development) or re-grading your property outside of the floodplain and protected stream buffers to channel water away from a structure,
3. Retrofit the existing crawl spaces under a residence by installing hydrostatic vents around the base of the structure.. Hydrostatic pressure from floodwaters is a major cause of damages to residences. These vents serve to equalize the pressures on the walls by allowing floodwaters to move freely both into and out of the crawl space. This option will, however, require the relocation of electrical equipment and HVAC systems.
4. Where practical, existing structures could be elevated above the base flood elevation. While potentially expensive, this option may be best suited to avoid future damage to a structure resulting from flood events.

Please note that any alteration to any building located on the property, or any alteration to your property in general, will require a permit from the Planning and Inspections Department before the commencement of work. Staff will be more than happy to assist you through the permit application and approval process and offer guidance on various options as detailed herein.

BUY FLOOD INSURANCE:

If you do not have flood insurance, the County strongly encourages you to talk with your insurance agent in order to understand the potential benefits of flood coverage.

Homeowner's insurance policies do not cover damage from flooding. As Orange County is a participant in the National Flood Insurance Program, you can purchase a separate flood insurance policy for your property. This insurance is backed by the federal government and is available to everyone, even for properties that have been flooded before.

Some people have purchased flood insurance because the bank required it when they got a mortgage or home improvement loan. Usually these policies just cover the building's structure and not the contents. During the kind of flooding that happens here in Orange County, the furniture and house contents can also be damaged.

At present there are approximately 70 flood insurance policies in effect throughout the unincorporated portions of Orange County. If you are covered, double check that the building coverage is adequate and make sure you have content coverage. Even if you think you have covered all your bases flood-wise, the next flood could be worse than Hurricane Fran was in 1996. Flood insurance covers all surface flooding.

Please do not wait to the next hurricane to buy flood insurance. There is a thirty-day waiting period before the policy takes effect. Contact your insurance agent for more information on rates and coverage.

BUILD RESPONSIBLY:

Before engaging in development activity, consult with the Planning Department to understand development opportunities and constraints for your property. As a reminder, the County prohibits development activity within identified Special Flood Hazard Areas (including placement of fill material and/or grading activities).

Also as you are finalizing proposed grading activities, staff encourages property owners to maintain natural grade within required setback areas (i.e. 40 ft. from a front property line and 20 ft. from side/rear property lines) to preserve existing drainage patterns.

The County Inspections Department enforces State building code requirement(s) requiring positive drainage away from residential/non-residential structures as part of the construction process.

Top Ten Facts

Every insurance agent needs to know about the National Flood Insurance Program (NFIP)

- 1 Almost every building in a participating community can be covered by flood insurance.**
 - 2 There is an easy-to-write flood insurance policy for low-to-moderate flood risk areas.**
 - 3 Coverage is available for both structure and contents.**
 - 4 Easy-to-use rating software is available.**
 - 5 Credit cards are accepted.**
 - 6 Provisional rating makes closings easier.**
 - 7 Contact the community building permit office for elevation information.**
 - 8 NFIP policies cover many basement elements.**
 - 9 Federal disaster loans and grants will require the purchase of flood insurance.**
 - 10 Buy now! There is a 30-day waiting period.**
- 1. You can sell federally-backed flood insurance to any resident or property owner in a community that participates in the NFIP.**
 - It doesn't matter if the property is in the floodplain or not. Almost everyone in the community qualifies for flood insurance coverage and nearly every community throughout the United States participates. Encourage policyholders to insure to value and to buy contents coverage.
 - 2. We offer an easy-to-write, low-cost flood insurance policy for people in low-to-moderate flood risk areas.**
 - One option combines structure and contents coverage in one. It's perfect for people located in B, C, and X zones where 20-25% of all flood insurance claims occur. Annual premiums range from \$112 to \$352 for homeowners, and begin at just \$500 for businesses.
 - Contents-only coverage is available for renters and owners of eligible properties.
 - 3. Coverage is available for both the structure and its contents.**
 - Single family residences can be covered for up to \$250,000 on the structure and \$100,000 on the contents.
 - Commercial structures can be insured to a limit of \$500,000 for the building and \$500,000 for the contents.
 - 4. Flood insurance is easy to rate with software for your personal computer.**
 - Several companies have developed flood insurance rating software to save you time, money, and office space.
 - For a free list of rating products, access the FEMA web site at <http://www.fema.gov/business/nfip/software.shtm>.
 - 5. Credit cards are accepted.**
 - Flood insurance premiums are easier to pay using major credit cards. Check with your WYO Company.
 - 6. Provisional rating makes it easier for you to sell flood insurance.**
 - Provisional rating makes coverage available before the elevation certificate is complete.
 - 7. You can obtain elevation information from many sources—at little or no cost to your client.**
 - More than 1,000 communities participate in the NFIP's Community Rating System (CRS). They maintain elevation information on structures in A and/or V zones. Contact the local building permit official for assistance. And, policyholders in CRS communities earn premium discounts!
 - 8. NFIP policies cover many basement elements.**
 - Basement coverage includes cleanup expense and items such as furnaces, water heaters, washers and dryers, air conditioners, freezers, utility connections, and pumps.
 - Basement coverage does not include the contents of a finished basement and improvements, such as finished walls, floors, and ceilings.
 - 9. Uninsured flood victims will most likely have to buy flood insurance as a condition of a federally-backed disaster loan or grant.**
 - Federal disaster assistance declarations are awarded in less than 50% of flooding incidents. The annual premium for an NFIP policy is less expensive than interest on Federal disaster loans. Wouldn't it be better for your clients to be insured before the loss occurs?
 - 10. Buy now! There is a 30-day waiting period.**
 - If the initial purchase of flood insurance is in connection with the making, increasing, extending or renewing of a loan, there is no waiting period.
 - If the initial purchase of flood insurance is made during the 13-month period following the issuance of a revised flood map for a community, there is one-day waiting period.

For more information, call the National Flood Insurance Program toll free at
1-800-427-4661 TDD 1-800-427-5593
<http://www.fema.gov> or <http://www.floodsmart.gov>

F-068 (07/06)

Site Data: **Sample Zoning Report - Activity 320 (2022)**

Zoning: Agricultural Residential (AR)
 Acreage: 10 acres
 Overlay Districts: Little River Protected Watershed Protection Overlay District

Plat/Legal Description: Lot 9 Phase 1 - Cascades (PB 44 / PG 136)
 Other:

Zoning Requirements:
 Max. Density: 1 unit for every 2 acres of property (Watershed Overlay)

Min. Lot Size: 40,000 sq.ft.
 Min. lot width: 150 ft.
 Maximum height: 25 ft.

Building Setbacks:
 Front (and Corner lots) = 40 ft. from property line/edge of right-of-way
 Side Setbacks = 20 ft.
 Rear Yard Setback = 20 ft.

FAR: N/A
 Max. Impervious Surface: 6% or 26,136 sq.ft. (10 acre lot)
 Open Space: N/A

Environmental Features:
 Streams/Water Bodies: There are streams on the property
 SFHA(Floodplain): Property is encumbered by floodplain
 Wetlands: Based on available data there are wetlands on the property
 Buffers: SFHA: 80 ft. Stream: 80 ft. Water Body: 80 ft. (wetlands)

Flood Info:
 Community #: 370342
 Panel #: 9886 Suffix #: K
 Map Number: 3710988600K
 Effective Date: 11/17/2017
 Floodway data: AE - Floodway ; AE 1% annual chance of inundation
 BFE: 567.5 ft. with Freeboards: 569.5 ft.
 Flood depth at structure: N/A (structure is at an elevation of 595 ft. based on contour data)

Land Disturbance Thresholds:
 1) Erosion Control Application/Permit required if disturbing more than 20,000 sq. ft.
 2) Stormwater Management Application/Permit required if disturbing more than 21,780 sq. ft. (half an acre) for residential structures.

*** Call OC Erosion Control at (919) 245-2586 for more information.

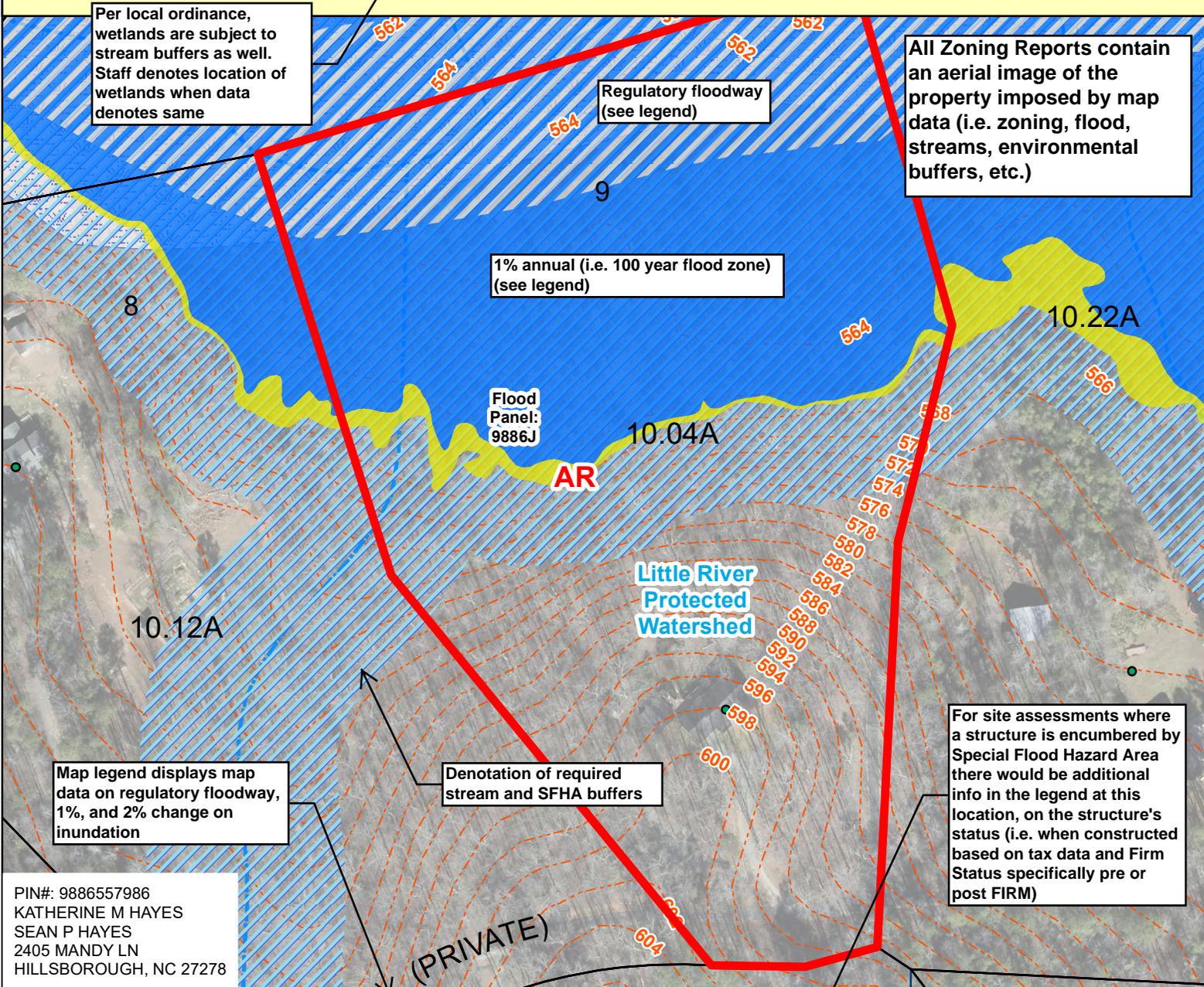
Notes:
 1) Private Road Justifications, Recorded Declarations, Restrictive Covenants, Bona Fide Farm status, use and building type (e.g. duplex units) will change subdivision and development requirements.

2) Wetlands data is taken from Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service and does not constitute a formal delineation (i.e. survey) of the property. All wetland areas are approximate.

3) Flood boundaries are subject to change based on periodic amendments to flood maps. Determination is based on current, best available, data.

4) This does not constitute a formal land survey.

(Date Site Assessment Completed: 3/31/2021 by mharvey)



Map legend displays map data on regulatory floodway, 1%, and 2% change on inundation

Denotation of required stream and SFHA buffers

Per local ordinance, wetlands are subject to stream buffers as well. Staff denotes location of wetlands when data denotes same

All Zoning Reports contain an aerial image of the property imposed by map data (i.e. zoning, flood, streams, environmental buffers, etc.)

For site assessments where a structure is encumbered by Special Flood Hazard Area there would be additional info in the legend at this location, on the structure's status (i.e. when constructed based on tax data and Firm Status specifically pre or post FIRM)

Legend denotes all available flood information for the parcel of focus

Map legend:

- Parcels
- Regulatory floodway
- 1% Annual Chance of Flooding (Previously referred to as the 100-year flood zone)
- 0.2% Annual Chance of Flooding (Previously referred to as the 500-year flood zone)
- USGS Stream
- Soils Survey Stream
- Zoning
- Watershed
- 2' Contours (NCDOT)
- Addresses
- Active
- Contour data is provided on all Zoning Reports

Scale: 1 in = 150 ft

Scale bar: 0, 80, 160, 320 Feet

North arrow

Seal of Orange County, North Carolina

Address: 2405 MANDY LN, HILLSBOROUGH, NC 27278

Owner: KATHERINE M HAYES, SEAN P HAYES

PIN#: 9886557986

August 1, 2022

RE: Participation in the National Flood Insurance Program - Services offered by the Orange County Planning Department

YOU ARE RECEIVING THIS LETTER BECAUSE:

- 1. Your property is located within a Special Flood Hazard Area (SFHA)**

OR

- 2. You are a surveyor, insurance agent, developer, real estate agent, or banker that does business in Orange County and work with property that could be encumbered by SFHA**

BACKGROUND: Orange County (hereafter “the County”) has been a member of the National Flood Insurance Program (NFIP) since approximately 1976.

In 1968 Congress created the NFIP to help provide a means for property owners to financially protect themselves from the possible damage of structures resulting from flood events. The program is intended to supplement typical homeowner insurance policies, which do not cover damage to structures resulting from a flood. The NFIP offers flood insurance to homeowners, renters, and business owners if their community participates in the program, specifically through the adoption and enforcement of regulations designed to mitigate/reduce flood risk.

Part of the program at our disposal are Flood Insurance Rate Maps (FIRM) denoting those areas of the County that are susceptible to flooding. The County utilizes these maps to verify the anticipated elevation of flood waters during a storm event and works with property owners to ensure structures are not located in areas where flooding is a possibility. Through the enforcement of our flood damage prevention regulations, the County requires design standards (i.e. elevation of structures and utilities, installation of flood vents, prohibition of specific activities, etc.) to reduce the risk of loss during a flood.

The County’s original FIRM became effective on March 16, 1981, with the latest becoming effective on October 14, 2018. Flood map data is available at the County Planning office or by visiting the North Carolina Flood Risk Information System (FRIS) webpage at:

<http://fris.nc.gov/fris/Home.aspx?ST=NC>

In accordance with our responsibilities as a member of the NFIP, the County has adopted its own flood regulations, currently embodied within the Orange County Unified Development Ordinance (UDO) and can be found utilizing the following link:

<http://www.co.orange.nc.us/DocumentCenterNiew/7355/UnifieddevelopmentOrdinance-PDF>.

WHAT DOES THIS MEAN? Being located in or near identified SFHAs does not inherently mean you cannot develop your property. There are steps you can take to mitigate your risk and, at the same time, ensure compliance with applicable flood regulations.

This letter is being sent as a courtesy to remind you of the service(s) the Planning Department provides with respect to understanding, and abiding by, local flood regulations as well as providing some proactive tips in addressing flood issues on your property.

COUNTY SERVICES: The County has made available a variety of documents on existing flood data as well as guidelines and flood protection methods for you to review in several convenient locations including:

- The Orange County Public Library - Hillsborough Branch on Margaret Lane,
- The County Planning office located on the second floor of the West Campus Office building at 131 W. Margaret Lane in downtown Hillsborough, and
- On the County Planning Department website utilizing the following link:
http://www.co.orange.nc.us/1_309/Floodplain-information.

If you are thinking about engaging in land disturbing activity on your property for any reason (i.e. building a new structure, grading, removing trees, etc.) you should first consult the Planning Department to understand what issues, if any, the project may create. Staff will be more than happy to schedule a formal meeting with you, on site, to discuss specific flood issues associated with your property and identify opportunities to correct or prevent flood damage. A breakdown of the services we offer, with respect to understanding and identifying flood issues on your property, include:

1. PROVISION OF MAPPING SERVICES / PREPARATION OF ZONING REPORTS:

County planning staff can assist you determine where floodplains are located on your property and provide basic mapping services to delineate them. While this service does not take the place of procuring a professionally prepared site plan where a surveyor formally delineates floodplains on your property, staff can provide vital information such as the depth of anticipated flood waters and the location of any structure with respect to its proximity to identified floodplains. As a free service the Planning Department can prepare a Zoning Report for your property. The Zoning Report, which utilizes Orange County Geographic Information Service (GIS) data, is intended to identify environmental conditions that may restrict the overall development of property. Data provided on Zoning Reports include, but are not limited to:

- a. The location of flood plain / special flood hazard areas / floodways on your property including the provision of the necessary information found on the Flood Insurance Rate Map (FIRM) needed to complete a flood insurance policy,
- b. Determining and denoting required floodplain buffers on your property,

- c. Identifying the location of streams and/or other protected water features including previously-mapped wetlands. This includes identifying/denoting required stream buffers. Stream buffers is a generic term for the required buffer around various water features (i.e. streams, hydrologically-connected water bodies, floodplains, wetlands, etc.) intended to be left in a natural state as part of our water quality guidelines/pollution protection measures as well as the preservation of the features natural .drainage function,
- d. Identifying the required base flood elevation requirements for the property based on local land use regulations,
- e. Determining the depth of flooding on your property (i.e. how deep flood waters can be anticipated to be) in order to provide you with a better concept of the property's potential flood hazard,
- f. Identifying the location of existing structures with respect to their distance from identified SFHA's as well as their elevation using existing contour data,
- g. Required minimum setbacks for structures from property lines,
- h. Impervious surface limits for the property,
- i. Erosion Control and Stormwater management land disturbance thresholds, specifically focusing on identifying if an erosion control permit or a stormwater management plan will be required based on the anticipated/proposed level of land disturbance,
- j. The presence of conservation or utility easements impacting the location of structure and/or utility systems (i.e. well and septic), and
- k. Soil types on a property.

Staff is also able to provide electronic copies of flood maps and other similar data denoting flood prone areas on your property as part of this service. During the preparation of this map staff identifies any and all regulations impacting the overall development of the property and provides direction on how you can address compliance.

Please remember to always check with the Planning Department before you initiate construction or land disturbing activities, or deposit fill material, on your property in order to avoid unnecessary problems with respect to compliance established regulations.

You do not need to schedule an appointment to obtain a Zoning Report, which any staff person can complete during normal business hours at our main office located on the second floor of the West Campus Office building located at 131 West Margaret Lane in downtown Hillsborough.

2. ASSISTANCE WITH FLOOD REGULATIONS:

The Planning Department is able to provide assistance, with respect to existing flood regulations and FIRM data, on the following:

- a. Base Flood Elevations as denoted on the most recent FIRM,
- b. Current and archived FIRM maps and flood data,
- c. Cross section elevations at selected locations,
- d. Approximate location of parcel lines,
- e. Zoning and watershed overlay designations,
- f. 2-foot topographic contour lines,
- g. Approximate location(s) of structure(s) utilizing aerial photographic data,
- h. Any FIRM adjustment approved through the Letter of Map Amendment (LOMA) or Letter of Map revision (LOMR) process, and
- i. Elevation Certificates for certain parcels.

As previously indicated herein the County has made available a variety of documents on existing flood data and local guidelines. Staff will be more than happy to schedule a formal meeting to review any issues, concerns, or questions you may have regarding our flood program.

3. ADDITIONAL SERVICES:

In addition to the mapping services and review of applicable floodplain management regulatory standards as detailed above, staff is also available to assist with the following:

- a. Completion of complementary site visits to review your specific situation. Staff can make themselves available, during normal business hours, to complete a site visit of your property in order to identify current opportunities and constraints related to flood issues on your property. Please note staff likes to complete a site visit before compiling documentation outlining options with respect to protecting your property.
- b. Preparation of documents detailing specific advice/options on ways to protect your property (i.e. retrofitting/flood proofing of structures, drainage improvements, etc.), and
- c. Review of any and all available financial assistance programs to assist with development/redevelopment activities.

BEING PROACTIVE - WHAT CAN YOU DO? Here are some simple tips for reducing potential negative impacts from flooding:

I. **STORMWATER MAINTENANCE:**

There are easy, proactive, steps property owners can take to address and even abate potential flooding risks. Here are some steps local property owners can take to not only help themselves but others within identified floodplain areas:

- a. Do not dump or throw anything into ditches or streams. Dumping grass clippings, leaves, trash, yard debris, etc. can accumulate and plug ditches, culverts, and channels thereby increasing the risk of flooding during storm events as rain water will have nowhere to go.
- b. The dumping of this material will also put you in violation of several County regulations and subject you to enforcement action.
- c. You are encouraged to keep any ditch on your property clear of brush and debris to avoid unnecessary flooding during a storm event.

Please visit our website at the link below for more information on the County's stormwater management program:

<https://www.orangecountync.gov/1305/Stormwater-Management>

If you witness dumping of materials into a stream please report the problem to the Planning Department at: (919) 245-2575.

II. **FLOOD PREPARADNESS AND SAFETY:**

You should prepare an emergency checklist to address simple steps that can be taken to mitigate the impacts of a flood on your property. These steps include:

- Shutting off the gas and electricity to any structure that has a history of being flooded.
- Moving valuable contents out of 'harms way'. There are also some basic safety tips you should keep in mind during flood conditions:
 - a. Prepare, in advance, a survival kit with bottled water, food, and medical supplies (i.e. prescription medication, basic first-aid items, etc.). Your survival kit should have sufficient stockpiles to last you for a minimum of 72 hours after a storm event.
 - b. Have a battery, or crank handled, emergency weather radio available to listen for news/information on storm events and conditions in the area.
 - c. Do not walk or drive through 'flowing' water or flooded areas. Drowning is the number one cause of flood deaths, mostly during flash floods. Current can be deceptive and remember that six inches of moving water can - knock you off your feet or impact your car. If you walk in standing water, use a pole of stick to ensure the area is still passable.

- d. Avoid driving through a flooded area. More people drown in their cars than anywhere else. Do not drive around road barriers as they may signal a bridge or roadway that has been washed out. If you have an emergency please contact the Orange County Sheriff's office or Emergency Services for assistance by dialing 911 before driving.
- e. Be alert for gas leaks and report them immediately to your utility provider. If you suspect a gas leak remember to always use a flashlight to inspect damage, do not use open flame devices (i.e. match, candles, lanterns, flare, etc.), and remember to extinguish all tobacco products (i.e. cigar, cigarettes, etc.) prior to going into an area where you suspect a gas leak. Also be cautious when inspecting damage in an enclosed space if you suspect a gas leak. Ensure the area is properly ventilated prior to entering.
- f. Stay away from power and electrical lines: the second highest cause of death resulting from a flood event is electrocution. Electrical current can travel through water. Report downed power lines immediately to your local power company and Orange County Emergency Services.
- g. Be on the lookout for animals, especially snakes. Small animals, who have been flooded out of their homes, may seek refuge in yours. Use a pole or a stick to turn things over to check for animals to avoid hurting them or yourself.
- h. Remember that after a flood the ground, and possibly floors of your residence, are covered with debris which can include broken bottles, glass, nails, and other similar hazards. Floors and stairs can also be very slippery. Walk in areas that have been inundated by flood waters with care to avoid injury.

III. FLOOD PROOFING:

As previously indicated there are several different ways to protect a building from flood damage, most notably locating structures outside of identified floodplains and stream buffers as well as ensuring the structure(s) are properly elevated above established flood elevations. There are also various options with respect to 'flood proofing' or addressing the impacts of existing structures including. Some basic options include:

- Retrofitting crawl spaces underneath a structure by relocating existing utilities (i.e. water heater, furnace, air conditioner, electric box) to some other location within the structure that is compliance with established flood regulations and installing hydrostatic vents. Hydrostatic pressure from floodwaters is a major cause of damage to structure(s) and can result in the catastrophic failure of the foundation. These vents allow floodwaters to move freely into and out of a crawl space thereby equalizing the water pressure on the walls. You will need to determine the location and number of vents necessary for the structure. Bear in mind hydrostatic vents cannot be higher than 1 foot above natural grade and the total vented area cannot be less than one square inch for every

square foot of crawl space wall subject to flooding. Also bear in mind vents cannot be modified to remain closed. In order for the vent to function properly it must be allowed to open and close based on water flow. You will have to maintain the vents by keeping them clear of debris to ensure they function properly.

- A second option would involve elevating the residence above established base flood elevation thresholds. While this option can be expensive it is an effective means of addressing flooding problems.

As previously indicates staff is more than happy to review various opportunities with you in protecting your property from damage as a result of flooding.

IV. FLOOD INSURANCE:

All property owners are encouraged to secure flood insurance regardless of the presence of floodplain on your property. Please bear in mind homeowners insurance policies do not cover damage to a structure resulting from flooding. If you do not have flood insurance talk with your insurance agent and get more information on securing a policy. This insurance is backed by the Federal Government and is available to everyone.

If you already have flood insurance, it is wise to double check that the building coverage is adequate and to make sure you have content coverage (i.e. coverage for materials. within the residence) as well.

Do not wait for the next major storm/hurricane to purchase flood insurance. There is a **THIRTY (30) DAY** waiting period before the policy takes effect. For more information on flood insurance, including rates and required documentation, please contact your local insurance agent to review and discuss options in more detail.

Orange County looks forward to providing you with additional assistance and information with respect to addressing flooding issues or for questions on your property, at your request. Please contact staff at (919) 245-2575 for assistance.

Sincerely,



Christopher Sandt, P.E.
Staff Engineer

August 1, 2022

RE: **REMINDER** - Flood Insurance Policy Holders - Benefits of Participating in the National Flood Insurance Program and Community Rating System

Orange County has been a member of the National Flood Insurance Program (NFIP) since approximately 1976. As part of this program the County chose to voluntarily participate in the Community Rating System (CRS) program in an effort to assist local residents with the cost of securing flood insurance.

CRS is a voluntary, incentive-based program, part of the NFIP that recognizes and encourages community floodplain management activities exceeding minimum established development standards. It is through the adoption and enforcement of these 'heightened' development restrictions that local property owners can receive a savings on their flood insurance premiums.

On December 13, 2011, the NFIP (on the behalf of FEMA) awarded Orange County a CRS Class score of eight (8), thus allowing for a discount on flood insurance premium rates for policy holders. On April 1, 2017, the County was awarded a CRS Class score of six (6), resulting in a further discount of approximately 10% on flood insurance premiums.

On May 12, 2022, the County was re-awarded its CRS Class score of six (6), resulting in a continued total discount of 20% on flood insurance premiums for most NFIP policies issued or renewed on or after October 1, 2022. This savings is a tangible result of the flood mitigation activities that Orange County implements to protect lives and reduce property damage.

For more information on our program and flood development services, please refer to the Orange County webpage at: <http://www.co.orange.nc.us/1325/FloodplainManagement>

Property owners can receive the aforementioned discount due to Orange County's efforts in achieving the three central goals of the CRS program:

1. Reduce flood losses,
2. Facilitate accurate insurance rating, and
3. Promote the awareness of flood insurance.

As a result of continued participation in the CRS program, and maintaining program initiatives, all existing flood insurance premiums for structures located within a floodplain are subject to the aforementioned twenty percent (20%) percent discount. Orange County is committed to bolstering our flood hazard mitigation program in a effort to ensure affordable flood insurance for local residents. While we are unable to guarantee further reductions in

insurance rates, we will continue our efforts to ensure preservation of the existing CRS rating and the aforementioned discount opportunity.

As indicated herein you are receiving this letter because, according to our records, you currently have a flood insurance policy on your property. This is an annual reminder sent by the Department to encourage you to review your current insurance policy and existing coverage thresholds with your insurance agent to ascertain what discounts are available and if they are sufficient. If you have not completed a comprehensive review of your policy in several years, staff encourages you to do so now.

Staff would also like to remind you we still provide assistance, with respect to existing flood regulations and FIRM data, on the following:

- a. Base Flood Elevation(s), as denoted on the most recent Federal Insurance Rate Map (FIRM), for your property,
- b. Maps denoting the 100 and 500 year floodplain(s) on property,
- c. Archived FIRMs data,
- d. Cross section elevations at selected locations,
- e. Parcel lines,
- f. Zoning and watershed overlay designations,
- g. Topographic contour detail for your property at two, five, and ten foot intervals,
- h. Approximate location(s) of structure(s) utilizing aerial photographic data,
- i. Any FIRM adjustment approved through the Letter of Map Amendment (LOMA) or Letter of Map revision (LOMR) process, and
- j. Elevation Certificates for certain parcels.

As a reminder, Orange County is in the process of preparing for an update to our official FIRM maps. More information will be sent as to the anticipated date/time of the public hearing where the revised FIRM maps are to be adopted.

Copies of the pending flood map data are available at the County Planning office or by visiting the North Carolina Flood Risk Information System (FRIS) webpage at: <http://fris.nc.gov/fris/Home.aspx?ST=NC>. Planning staff will be more than happy to meet individually with any interested property owner to continue to review the current and future status of your property with respect to the implementation of the new FIRM maps.

Should you have any further questions please call me at (919) 245-2575.

Sincerely,



Christopher Sandt, P.E.
Staff Engineer

Activity 340

ORANGE COUNTY, NORTH CAROLINA
COMMUNITY RATING SYSTEM (CRS) RECERTIFICATION – AUGUST 2022
ACTIVITY 340 – HAZARD DISCLOSURE:

The County continued to require all Final Minor and Major Subdivision plats to denote the SFHA on a plat in order to be recorded (screen shot of requirement from County UDO):

- noted on the Final Plat.
- (5) **Special Flood Hazard Area (SFHA) Standards**
- (a) The boundary of the SFHA shall be designated and labeled on the plat as required by this Ordinance.
 - (b) For subdivisions located within a water supply watershed of regional and/or local importance, the following information shall be shown on the Final Plat:
 - (i) The maximum impervious surface data as required by Section 4.2 of this Ordinance shall be shown for each lot.
 - (ii) Stream buffers as required by Section 6.13 of this Ordinance shall be delineated with widths noted on the Final Plat.
 - (iii) Development restrictions within the stream buffer shall be specified in a separate document to be recorded concurrently with the Final Plat. The Deed Book and Page reference shall be noted on the Final Plat.
 - (iv) Storm water detention and/or retention sites and undisturbed areas for infiltration purposes as required by Section 4.2 and 6.13 of this Ordinance shall be delineated and labeled on the Final Plat.
 - (v) Any restrictions or requirements associated with the detention/retention sites shall be specified in a separate document to be recorded concurrently with the Final Plat. The Deed Book and Page reference shall be noted on the Final Plat.
- (6) **Open Space and Natural and Cultural Resource Areas**
- (a) Any areas identified in the "Inventory of the Natural Areas and Wildlife Habitats of Orange County, North Carolina" shall be shown on the Final Plat.

As detailed within **Activity 320** the County creates Site Assessments, free of charge, outlining development opportunities and constraints for a parcel of property. This includes identification of flood hazard areas, base flood elevation(s), flood depth at structure, and required floodplain buffers per local land use regulations.

- (ii) The location and dimensions of proposed pedestrian paths and sidewalks, bike lanes or paths, and bus stops shall also be shown.
- (iii) Proposed streets, pavement or travelway widths shall be denoted as well as typical roadway cross sections. The approximate centerline radius shall be shown on all proposed streets.
- (iv) Proposed street names shall be indicated on the plat. Such names shall not duplicate or approximate the name of any other street in Orange County except where a proposed street is the continuation or extension of an existing street.

(6) Utility and Drainage Data

- (a) Proposed utility systems shall be shown on the plat, including but not limited to:
 - (i) Public or private community water supply systems,
 - (ii) Public or private community sewage disposal systems, and
 - (iii) Storm drainage facilities, including existing and proposed drainageways and channels.
- (b) Any easements associated with such utility systems shall also be denoted and the purpose for the easements designated on the plat.

(7) Landscaping and Buffer Data

The following information shall be denoted on the Preliminary Plat to demonstrate compliance with the provisions of Section 6.8 of this Ordinance:

- (a) Existing trees and/or vegetation to be preserved and proposed trees and/or landscape materials to be installed.
- (b) Required buffers.

(8) Special Flood Hazard Area (SFHA) Standards

- (a) The boundary of the Special Flood Hazard Area zoning overlay district shall be designated and labeled on the plat as required by this Ordinance.
- (b) For subdivisions located within a Watershed Protection Overlay District, as identified on the Orange County Zoning Atlas, the following information shall be designated and labeled on the plat:
 - (i) Impervious surface data as required by Section 4.2 of this Ordinance;
 - (ii) Stream buffers as required by Section 6.13 of this Ordinance; and
 - (iii) Stormwater detention and/or retention sites and undisturbed areas for infiltration purposes as required by the Section 6.14 of this Ordinance.

7.14.3 Final Plat Specifications

(A) Plat Preparation

- (1) The Final Plat shall be drawn in accordance with the requirements of G.S. 47-30 as amended and to the specifications of this Section. The plat shall be prepared by a Professional Land Surveyor at a scale of not less than 100 feet to the inch nor more than 20 feet to the inch.

- (2) All Final Plats shall be prepared in accordance with the Manual of Practice for Land Surveying in North Carolina as prepared by the North Carolina State Board of Registration for Professional Engineers and Land Surveyors.

(B) Title Block

A title block shall be placed on the plat, which shall contain the following information:

- (1) The name of the subdivision, preceded by the words "Final Plat of _____", which shall not duplicate nor closely approximate, phonetically or in spelling, the name of any other subdivision in Orange County, and, where the plat at hand is only part of a larger subdivision bearing the same name, the unit or section number of other necessary identification;
- (2) The graphic scale in feet per inch in words or figures and bar graph; a north arrow accurately positioned and designated as magnetic north, true north, North Carolina State Plane Coordinate Grid System North or north referenced to a recorded instrument with the recording reference shown; the date or dates the survey was conducted; and any other pertinent legend data;
- (3) State, county and township location; tax map, Parent PIN, block and lot number references; and deed book and page number citations for the property being subdivided; and
- (4) The name and address of the owner(s) of the land being subdivided; the name and address of the subdivider if other than the owner; and the name and address, registration number and seal of the land surveyor responsible for preparation of the plat.

(C) Vicinity Map

- (1) A vicinity map showing the general location of the subdivision in relation to the surrounding area shall be placed on the plat.
- (2) The vicinity map shall be drawn at a sufficient size to show the relationship of the tract to the existing street or highway system and readily recognized Orange County landmarks.
- (3) The vicinity map shall show the street names in addition to the SR designations.

(D) Existing Site Data

Information on existing conditions shall be shown as noted below.

(1) Boundary Lines

- (a) The location, distance and bearings for the boundary line of the tract to be subdivided.
- (b) Areas not designated as lots that will be under common ownership such as a conservancy, public agency or similar entity or a homeowners' association's ownership shall be appropriately labeled as tracts.
- (c) Locations of corporate limits or Extraterritorial Zoning Jurisdiction (ETJ) lines, township boundaries, and county lines.
- (d) The names of owners and Parcel Identification Numbers (PIN) of adjacent land.
- (e) For adjacent land that is platted, the subdivision plat name, plat book and page number abutting the tract to be subdivided shall also be shown.

(2) Other Conditions

- (a) If any portion of the final plat includes land referenced in the "Inventory of the Natural Areas and Wildlife Habitats of Orange County, North Carolina" it shall be shown on the plat.

- (b) Constructed features including houses, barns, sheds, railroads and overhead utility lines.
- (c) Cemeteries if designated either by a previously recorded instrument or if disclosed to or found by the surveyor during the course of the survey.
- (d) All street rights-of-way, which adjoin the boundaries of the tract being subdivided, shall be shown with dashed lines and shall denote the right-of-way location and width.

(E) Subdivision Layout Data

The lot design plan shall be drawn and shall show the following information:

(1) Lot Arrangement and Development Potential

- (a) The lot lines, Parent Parcel Identification Number, and lot and block numbers of each lot shall be shown on the plat.
- (b) Blocks shall be consecutively numbered or lettered in alphabetical order and, all lots in each block shall be consecutively numbered.
- (c) Lot and block numbers provided shall be in substantial compliance with those shown on the approved Preliminary Plat.
- (d) The location and dimensions of all lot lines, all new easements and any existing easements which are recorded or easements which are visible and apparent reservations, and areas dedicated to public or private use with notes stating their purposes shall be shown on the Final Plat.
- (e) Lots shown on the Final Plat shall be substantially the same as those shown on the approved Preliminary Plat.
- (f) Front, rear, and side yard setbacks that are greater than the minimum setback requirements of the district in which the parcel is located shall be designated with dashed lines on the individual lots and labeled as 'Minimum Setback'.
- (g) All lots which are of restricted development potential shall be noted on the Final Plat with reference to a separate recorded instrument which describes the restricted lot(s) by metes and bounds and designates the lot as "Of restricted development potential because of (specify condition), pursuant to Section 7.6.3 of the Orange County Unified Development Ordinance".

(2) Streets and Transportation Systems

- (a) The location, dimensions and classification (public or private) of all streets, new easements or any existing easements which are recorded or which are visible and apparent uses, alleys and other public or private ways shall be shown on the Final Plat, including pedestrian and non-motorized vehicle easements.
- (b) All streets intended for future extension either within or beyond the boundaries of the subdivision shall clearly be indicated on the Final Plat by the words, "Subject to future extension".
- (c) A No Vehicular Access Easement (NVA) (aka Negative Access Easement) 10 feet in width shall be designated, with a dashed line, along the right-of-way of all lots and tracts where direct vehicular access to a roadway is not approved.

- (d) Street names, including State road numbers if applicable, shall be indicated on the Final Plat and shall not duplicate or approximate the name of any other street in Orange County, or an adjacent County if a similar street name is in use in the vicinity, except where a street is the continuation or extension of an existing street.
- (e) All street names shall be approved through the Orange County Land Records office.

(3) Utility and Drainage Data

- (a) Construction plans shall be submitted to proper authorities, as required, to document any new:
 - (i) Public or private community water supply system,
 - (ii) Public or private community sewage disposal system, and/or
 - (iii) Storm drainage facilities.
- (b) Written approval of the reviewing authorities and a set of approved construction plans shall be submitted to the Planning Department prior to approval of the Final Plat.
- (c) The location and purpose of all new easements for utility systems shall be shown on the Final Plat, including, but not limited to, :
 - (i) Sanitary sewers,
 - (ii) Septic tanks and nitrification fields,
 - (iii) Storm sewer lines,
 - (iv) Water mains,
 - (v) Gas, transmission mains,
 - (vi) Overhead electric, telephone and CATV transmission mains, and
 - (vii) Any other above or below ground utility systems which are contained within a designated easement.
- (d) It is understood that utility distribution systems to individual lots for gas, electric, telephone, and TV cable service are customarily covered by "blanket easements" or "general easements". If these easements have been recorded, the recording data shall be shown on the plat. Otherwise, these easements need not be denoted on the plat.

(4) Landscaping and Buffer Data

Buffers widths and locations as required by Section 6.8 of this Ordinance shall be shown on the Final Plat and specified in a separate document to be recorded concurrently with the Final Plat. The Deed Book and Page reference shall be noted on the Final Plat.

(5) Special Flood Hazard Area (SFHA) Standards

- (a) The boundary of the Special Flood Hazard Area zoning overlay district shall be designated and labeled on the plat as required by this Ordinance.
- (b) For subdivisions located within a water supply watershed of regional and/or local importance, the following information shall be shown on the Final Plat:
 - (i) The maximum impervious surface data as required by Section 4.2 of this Ordinance shall be shown for each lot.

- (ii) Stream buffers as required by Section 6.13 of this Ordinance shall be delineated with widths noted on the Final Plat.
- (iii) Development restrictions within the stream buffer shall be specified in a separate document to be recorded concurrently with the Final Plat. The Deed Book and Page reference shall be noted on the Final Plat.
- (iv) Storm water detention and/or retention sites and undisturbed areas for infiltration purposes as required by Section 4.2 and 6.13 of this Ordinance shall be delineated and labeled on the Final Plat.
- (v) Any restrictions or requirements associated with the detention/retention sites shall be specified in a separate document to be recorded concurrently with the Final Plat. The Deed Book and Page reference shall be noted on the Final Plat.

(6) Protection of Natural and Cultural Resources

- (a) Any areas identified in the "Inventory of the Natural Areas and Wildlife Habitats of Orange County, North Carolina" shall be shown on the Final Plat.
- (b) A description of the resource, and the conditions of subdivision approval, which assure its protection shall be included in a document of describing development restriction to be recorded concurrently with the plat.

(F) Certificates and Endorsements

(1) General

The Final Plat shall be made by or prepared under the supervision of a Professional Land Surveyor licensed to practice in the State of North Carolina and shall contain a certificate as required by Section 47-30 of the General Statutes and prepared in substantially the following form and acknowledged by a notary public:

"I, _____, certify that this plat was drawn under my supervision from (an actual survey made under my supervision) (deed description recorded in Book _____, Page _____, etc.) (other); that the ratio of precision is 1: _____; that the boundaries not surveyed are shown as broken lines plotted from information found in Book _____, Page _____; that this map was prepared in accordance with G.S. 47-30 as amended. Witness my hand and seal this _____ day of _____, A.D., 20____."

Seal or Stamp

Surveyor Registration Number

(The surveyor shall also certify on the plat as required by G.S. 47-30 (f) (11) as amended.)

(2) Certificates of Dedication and Maintenance

- (a) The following certificate shall be printed on the Final Plat and shall be followed by the signature of the owner(s) of the property being subdivided acknowledged by a notary public.

"The undersigned owner hereby certifies that the land shown hereon is located within the subdivision-regulation jurisdiction of Orange County and hereby freely dedicates all rights-of- way, easements, streets, recreation areas, open spaces, common areas, utilities and other improvements to public or private common use as noted on this plat, and further assumes full responsibility for the maintenance and control of said improvements until they are accepted for maintenance and control by an

appropriate public body or by an incorporated neighborhood or homeowners association or similar legal entity.”

Owner(s): _____

Date: _____

- (b) Where a Final Plat shows a private road, an instrument substantially in the form of the County’s Standard Road Maintenance Agreement entitled, “DECLARATION OF RESTRICTIONS AND PROVISIONS FOR PRIVATE ROAD MAINTENANCE”, shall be recorded contemporaneously with the recordation of the approved Final Plat which guarantees: (a) right of access to any private road in the subdivision by all lots served by the road and by law enforcement and emergency vehicles, (b) right of access for the proposed private road to a State or municipally maintained road by way of direct access or other private roads, (c) perpetual maintenance for any private road serving the subdivision at the standards set for approval, and (d) provide record notice of the probability that future development dependent on the private roads for access will require upgrading of the roads to a higher private road standard or public dedication and upgrading of the road to North Carolina Department of Transportation standards.

This instrument shall also note acceptance by the owner of all liability related to the use of the road, and agreement to hold both the County and State harmless from such liability, and acknowledge that some public services may not be provided due to the private nature of the road. The guarantees of right of access and maintenance of the subdivision roads shall run with the land and shall be disclosed to any prospective purchaser of land in the subdivision as provided in North Carolina General Statutes Chapter 136- 102.6. Upon recordation the Deed Book and Page Number of the recorded document shall be referenced on the Final Plat.

Owner(s): _____

Date: _____

- (c) The following shall be printed on the final plat and shall be followed by the signature of the County Manager:

“Orange County hereby accepts, for the use of the general public, without maintenance responsibility, the offer of public dedication of all public rights-of-way, public easements, public streets, public recreation areas, public open space, public utilities and other public improvements shown on this plat.”

County Manager: _____

Date: _____

(3) Certificates of Approval

- (a) A Final Plat for a minor subdivision shall show the following form for Planning Department endorsement: “I hereby certify that the subdivision plat shown hereon has been found to comply with the Orange County Subdivision Regulations, provided that this plat shall be recorded within ninety (90) days of final approval, approved by the Orange County Planning Department on _____(Date).”

Planning Director or Authorized Agent Date

- (b) A Final Plat for a major subdivision shall show the following form for Planning Department endorsement: "I hereby certify that the subdivision plat shown hereon has been found to comply with the Orange County Subdivision Regulations. Provided that this plat shall be recorded within ninety (90) days of final approval, approved by the Orange County Planning Department on _____(Date)."

 Planning Director or Authorized Agent Date

- (c) (c) Where sewage disposal within all or a portion of a subdivision is to be accomplished through the installation and use of surface sewage disposal systems, the plat shall show the following form for Orange County Health Department endorsement:

"Soil and site evaluations have been conducted by the Orange County Health Department, Environmental Health Division, and unless otherwise noted, an area on each lot has been tentatively designated for the installation and repair of a wastewater system. This certification is not an Improvement Permit or an approval for a septic system on any of the lots. Subsequent changes to the lots may affect the ability to obtain Improvement Permits and/or Construction Authorizations.

 Environmental Health Specialist Date

- (d) Where water and/or sewage disposal is to be provided by a public or quasi-public entity the following statement shall be certified by the person authorized to represent the service provider:

"I hereby certify that the construction plans for the water system and/or sewer system have been approved for [Name of Project]. The utilities have been constructed, or secured via an irrevocable Letter of Credit, to the [Service Provider] standards.

 [Authorized Signature] Date

 [Attest Signature] Date

SEAL

- (e) Where a division of property is found to be exempt from the provision of this Ordinance as specified in Section 7.2, the plat shall show the following statements for Planning Department endorsement:

"I hereby certify that the division of property shown and described hereon is exempt from the subdivision regulations contained in the Orange County Unified Development Ordinance.

 Planning Director Date

- (f) Where a property is recombining property that includes a vacant lot or an existing dwelling the following statement shall be shown on the plat:

"The recombination of existing lots has been reviewed by the Orange County Health Department, Environmental Health Division. Based on available information, this proposal does not appear to adversely affect the suitability of the lots for the issuance of an improvement permit, nor the installation, maintenance, or repair of an existing wastewater system.

This certification is not an Improvement Permit or an approval for septic system on any of the lots. Subsequent changes to the lots may affect the ability to obtain Improvement Permits and/or Construction Authorizations."

- (g) Where lots have been approved for recordation by either the Orange County School System or the Chapel Hill/Carrboro School System the following statement and endorsements shall appear on the final plat:

I hereby certify that the lots shown on this plat have been approved by the _____ School System for recordation prior to [Insert date] in accordance with the Schools Adequate Public Facilities Ordinance.

Chair Date

Secretary Attest Date

SEAL

- (h) All certificates and endorsement signatures on the Final Plat, except those of the County Manager, Planning Board Chair, Planning Director and Environmental Health Officer shall be notarized by the statement of a Notary Public entered on the Final Plat. The Notary Public statement shall be shown in substantially the following form:

"North Carolina _____ County

I, a Notary Public of the County and State aforesaid, certify that _____ personally appeared before me this day and acknowledged the execution of the foregoing certificate. Witness my hand and seal this ____ day of _____, 20__.

"Seal or Stamp Notary Public

My Commission expires _____

(4) Certificate of Improvements

- (a) If the required improvements are completed prior to the submission of the Final Plat, then one of the following certificates shall be shown on the plat and followed by the County Manager's signature:

"The County Manager hereby certifies that all improvements required by the Orange County Subdivision Regulations have been installed as specified by the approved Preliminary Plat for _____ Subdivision and that said improvements comply with Orange County specifications."

County Manager: _____ Date: _____

- (b) If the required improvements are not completed prior to the submission of the Final Plat and their completion is not insured by regulations applicable to developments financed by the U.S. Department of Housing and Urban Development, the following certificate shall be recorded followed by the County Manager's signature:

"The County Manager hereby certifies that (a) cash in the amount of \$_____, or (b) an irrevocable letter of credit by an approved institution and as approved by the Orange County Attorney, has been posted with Orange County guaranteeing that all improvements will be installed as specified by the approved Preliminary Plat for _____

Subdivision. All required improvements must be completed within three hundred and sixty-five (365) days hereof.”

County Manager: _____ Date: _____

Activity 350

ORANGE COUNTY, NORTH CAROLINA
COMMUNITY RATING SYSTEM (CRS) RECERTIFICATION – AUGUST 2022
ACTIVITY 350 – FLOOD PROTECTION INFORMATION:

The County maintains a comprehensive webpage devoted to providing information to interested parties which can be accessed at: <http://www.co.orange.nc.us/1309/Floodplain-Information>.

Screen shots of the webpages are included.

Additional pertinent information related to content is as follows:

1. The main page contains the following:
 - a. History of our program including our participation in the CRS,
 - b. A copy of our 2020 CRS re-certification package,
 - c. Copies of letters sent out to various parties as detailed under Activity 330 of this document,
 - d. A link to webpage (b),
 - e. Links providing detailed information on the following topics:
 - i. Flood Insurance;
 - ii. Flood Preparedness and Safety;
 - iii. Floodplain Management – Services including the following information:
 1. A link to our standard operating procedures for processing a floodplain development permit and elevation certificates,
 2. Link(s) to all elevation certificates the County has on-file,
 3. Link(s) to the Elevation Certificate and instruction sheet as well as our floodplain development permit application,
 4. A link to our Unified Development Ordinance.
 - iv. Property Protection Measures;
 - v. Stormwater and Drainage System Maintenance;
 - vi. Substantial Improvement and/or damage requirements; and
 - vii. Additional Resources which provides links/PDFs of the following information:
 1. <https://www.floodsmart.gov/>.

2. <http://www.fema.gov/>,
3. The County Interactive Geographic Image System (GIS) site,
4. The North Carolina Flood Risk Information System (FRIS) webpage at: <http://fris.nc.gov/fris/Home.aspx?ST=NC>,
5. Links to the Orange County Emergency Services webpage for up to date warnings, safety, and evacuation information associated with a storm event,
6. A link to information related to the installation of flood vents on a residential structures,
7. Information on reducing flood risk to residential buildings that cannot be elevated,
8. A link to information on retrofitting existing residences to address potential flood damage,
9. Information on protecting manufactured homes,
10. A link to information on flood proofing non-residential structures, and
11. A link for real estate agents for more information on flood insurance.

The County webpage provides links several key document(s) including the FEMA Elevation Certificate, County Floodplain Development Permit, Administrative Procedures regarding the application of the County floodplain management program, etc. Staff observes the following Standard Operating Procedure (SOP) related to the maintenance of the County webpage:

1. Every thirty days, staff accesses the portion of the webpage testing all links to ensure documents are still accessible.

If links are broken or non-responsive, staff works with the Department web coordinator to fix. Broken links are typically addressed within 48 hours of being identified as faulty by Planning staff;
2. During this testing, staff reviews documents to ensure information is still accurate.

For example, staff provides a link on the County webpage to the FEMA elevation certificate. In checking the link, staff verifies the most current application form is available for use;
3. During testing, staff reviews the information provided on the County's floodplain management program and updates information as needed. Revised text/information are typically posted within 48 hours of being modified.

A screen shot of these links follows:

<p>Consult the Planning Department</p> <p>If you are thinking about engaging in land disturbing activity on your property for any reason (i.e. building a new structure, grading, removing trees, etc.) you should first consult the Planning Department to understand what issues, if any, the project may create. Staff will be more than happy to schedule a formal meeting with you, on site, to discuss specific flood issues associated with your property and identify opportunities to correct or prevent flood damage.</p> <p>To aid you in addressing potential flood development issues on your property, the staff of the Orange County Planning Department offers the following services free of charge:</p> <p>1. PROVISION OF MAPPING SERVICES / PREPARATION OF SITE ASSESSMENT(S):</p> <p>County planning staff can assist you determine where floodplains are located on your property and provide basic mapping services to delineate them. While this service does not take the place of procuring a professionally prepared site plan where a surveyor formally delineates floodplains on your property, staff can provide vital information such as the depth of anticipated flood waters and the location of any structure with respect to its proximity to identified floodplains.</p> <p>As a free service the Planning Department can prepare an environmental site assessment of your property. This assessment, which utilizes Orange County Geographic Information Service (GIS) data, is intended to identify environmental conditions that may restrict the overall development of a specific parcel of property.</p> <p>Data provided on these assessments include, but are not limited to:</p> <ul style="list-style-type: none"> • The location of flood plain / special flood hazard areas / floodways on your property including the provision of the necessary information found on the Flood 	<p style="text-align: right;">245-2600 or 919-245-2601</p> <p>Check our Holiday Calendar for variations in work hours, or the Severe Weather Delays and Closings page.</p> <p>Directory</p> <p>Quick Links</p> <ul style="list-style-type: none"> ◦ Floodplain Elevation Certificate Form and Instructions from FEMA ◦ Floodplain Development Permit (PDF) ◦ Administrative Procedures Regarding the Application of Flood Damage Prevention (PDF) ◦ Orange County Unified Development Ordinance <p style="text-align: center; background-color: #0056b3; color: white; border-radius: 15px; padding: 10px; display: inline-block;">View All</p>
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Staff continues to maintain, with the assistance of Ms. Erin Sapienza (current Director of the Orange County Library system), the following FEMA publications which are catalogued within the system and available for public use:

1. Reducing Flood Risk to Residential Buildings that cannot be elevated – FEMA P-1037 / September 2015
2. Summary of Coverage – FEMA F-679 / November 2012
3. FloodSmart.gov , Know your risk (04-15)
4. Openings in Foundation Walls and Walls of Enclosures – Technical Bulletin 1 / August 2008
5. About the Mandatory Purchase of Flood Insurance
6. Protecting manufactured Homes from Floods and other Hazards – FEMA P-85, Second Edition / November 2009
7. Floodproofing Non-Residential Buildings – FEMA P-936 – July 2013

Additional Resources

Resources List

- For more information on the National Flood Insurance Program (NFIP) and facts on flood insurance please visit: Flood Smart. For quick answers to frequently asked questions please visit: Flood Smart FAQs.
- For more information on FEMA programs and activities please visit: [FEMA](#).
- The County Interactive Geographic Image System (GIS) can also provide basic maps denoting the location of floodplain on properties within the County. Access the [County GIS Interactive Mapping System](#).
- Additional flood map information for properties in Orange County is available by visiting the [North Carolina Flood Risk Information System \(FRIS\) webpage](#).
- For up to date warnings, safety, and evacuation information associated with a storm event please visit the Orange County [Emergency Services page](#).
- For more information on the installation of flood vents on a residential structure please read [Openings in Foundation Walls and Walls of Enclosure \(PDF\)](#).
- View more information on [reducing flood risk to residential buildings that cannot be elevated \(PDF\)](#).
- View more information on [retrofitting existing residences to address potential flood damage \(PDF\)](#).
- View more information on [protecting manufactured homes \(PDF\)](#).
- View more information on [flood proofing non-residential structures \(PDF\)](#).
- Real estate agents can [read for more information on flood insurance \(PDF\)](#).

Other Links for Information

The Federal Emergency Management Agency (FEMA) has established its [own homepage](#), and the Cooperating Technical Partner, The State of North Carolina has its [own website](#).

Hurricane Preparedness Information

Local Flood Hazards - After a particularly severe hurricane or nor'easter has passed through the Piedmont region, we have experienced heavy flooding along our streams and rivers. Often debris becomes trapped under bridges and culverts. This blockage backs floodwaters up even more, often up to four feet or more deep. Over the past thirty years we have experienced six major hurricanes:

- Diane in 1984
- Gloria in 1985
- Bertha in 1996
- Fran in 1996
- Bonnie in 1998
- Floyd in 1999

Of these Fran was the worst with estimated flood levels somewhere between a 100- and a 500-year flood along several streams. Floods are dangerous. Even though they seem to be moving slowly, moving water as shallow as two feet can knock a grown man off his feet and float a car.

Property Subject to Flooding

If you live along or near the Eno River, the Little River, Morgan Creek or New Hope Creek, you may have experienced these high water times. To find out if your property is subject to flooding, please visit the [County Interactive GIS Homepage](#).

Contact the County

300 West Tryon Street
 P.O. Box 8181
 Hillsborough, NC 27278
 Phone: [919-732-8181](tel:919-732-8181)

Contact the [Webmaster](#).

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Flood Insurance

National Flood Insurance Program (NFIP)

The National Flood Insurance Program (NFIP) is a federal program enabling property owners in participating communities to purchase flood insurance on eligible buildings and contents, whether they are in or out of a floodplain. This community participates in the NFIP, making federally backed flood insurance available to its property owners.

The NFIP insures most walled and roofed buildings that are principally above ground on a permanent foundation, including mobile homes, and buildings in the course of construction. Property owners can purchase building and contents coverage from any local property and casualty insurance agent. To find a local insurance agent that writes flood insurance in your area visit the [Flood Smart website](#).

Mandatory Purchase Requirement

Pursuant to the Flood Disaster Protection Act of 1973 and the National Flood Insurance Reform Act of 1994, the purchase of flood insurance is mandatory for all federal or federally related financial assistance for the acquisition and/or construction of buildings in Special Flood Hazard Areas (SFHAs). An SFHA is defined as any A or V flood zone on a Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM).

The mandatory purchase requirement also applies to secured loans from such financial institutions as commercial lenders, savings and loan associations, savings banks, and credit unions that are regulated, supervised, or insured by federal agencies, such as the Federal Reserve, the Federal Deposit Insurance Corporation, the Comptroller of Currency, the Farm Credit Administration, the Office of Thrift Supervision, and the National Credit Union Administration. It further applies to all loans purchased by Fannie Mae or Freddie Mac in the secondary mortgage market.

Federal financial assistance programs affected by the laws include loans and grants from agencies such as the Department of Veterans Affairs, Farmers Home Administration, Federal Housing Administration, Small Business Administration, and FEMA disaster assistance.

How It Works

When making, increasing, renewing, or extending any type of federally backed loan, lenders are required to conduct a flood zone determination using the most current FEMA FIRM to determine if any part of the building is located in an SFHA. If the building is in an SFHA, the federal agency or lender is required by law

to provide written notification to the borrower that flood insurance is mandatory as a condition of the loan. Even though a portion of real property on which a building is located may lie within an SFHA, the purchase and notification requirements do not apply unless the building itself, or some part of the building, is in the SFHA.

However, lenders, on their own initiative, may require the purchase of flood insurance even if a building is located outside an SFHA. Up to 25% of all NFIP flood losses arise from outside SFHAs (B, C, and X Zones).

Coverage

Under federal regulations, the required coverage must equal the amount of the loan (excluding appraised value of the land) or the maximum amount of insurance available from the NFIP, whichever is less. The maximum amount of coverage available for a single-family residence is \$250,000 and for non-residential (commercial) buildings is \$500,000. Federal agencies and regulators, including government-sponsored enterprises, such as Freddie Mac and Fannie Mae, may have stricter requirements.

Properties Not in the SFHA

Please note even if your property is not located within a SFHA you should talk with your insurance agent about the benefits of flood insurance. Homeowner's insurance policies do not cover damage from flooding. However, because Orange County participates in the National Flood Insurance Program, you can purchase a separate flood insurance policy. This insurance is backed by the federal government and is available to everyone.

Be Proactive

Please do not wait to the next hurricane or major storm event to buy flood insurance. There is a thirty-day waiting period before the policy takes effect. Contact your insurance agent for more information on rates and coverage.



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Flood Preparedness & Safety

Emergency Checklist

You should prepare an emergency checklist to address simple steps that can be taken to mitigate the impacts of a flood on your property. These 'steps' include:

- Shutting off the gas and electricity to any structure that has a history of being flooded.
- Moving valuable contents out of 'harm's way'.

Safety Tips

There are also some basic safety tips you should keep in mind during flood conditions, they include:

- Prepare, in advance, a survival kit with bottled water, food, and medical supplies (i.e. prescription medication, basic first-aid items, etc.). Your survival kit should have sufficient stockpiles to last you for a minimum of 72 hours after a storm event.
- Have a battery, or crank handled, emergency weather radio available to listen for news/information on storm events and conditions in the area.
- Do not walk or drive through 'flowing' water or flooded areas. Drowning is the number one cause of flood deaths, mostly during flash floods. Current can be deceptive and remember that 6 inches of moving water can knock you off your feet or impact your car. If you walk in standing water, use a pole or stick to ensure the area is still passable.
- Avoid driving through a flooded area. More people drown in their cars than anywhere else. Do not drive around road barriers as they may signal a bridge or roadway that has been washed out. If you have an emergency please contact the Orange County Sheriff's office or Emergency Services for assistance by dialing 911 before driving.
- Be alert for gas leaks and report them immediately to your utility provider. If you suspect a gas leak remember to always use a flashlight to inspect damage, do not use open flame devices (i.e. match, candles, lanterns, flare, etc.), and remember to extinguish all tobacco products (i.e. cigar, cigarettes, etc.) prior to going into an area where you suspect a gas leak. Also be cautious when inspecting damage in an enclosed space if you suspect a gas leak. Ensure the area is properly ventilated prior to entering.
- Stay away from power and electrical lines. The second highest cause of death resulting from a flood event is electrocution. Electrical current can travel through water. Report downed power lines

immediately to your local power company and Orange County Emergency Services. Have your electricity turned off by the utility company in the event of severe damage to your residence. Do not attempt to do so yourself.

- Remember some appliances, such as television sets, keep electrical charges even after they have been unplugged. Do not use appliances or motors that have gotten wet unless they have been taken apart, cleaned, and dried.
- Be on the lookout for animals, especially snakes. Small animals, who have been flooded out of their homes, may seek refuge in yours. Use a pole or a stick to turn things over to check for animals to avoid hurting them or yourself.
- Remember that after a flood the ground, and possibly floors of your residence, are covered with debris which can include broken bottles, glass, nails, and other similar hazards. Floors and stairs can also be very slippery. Walk in areas that have been inundated by flood waters with care to avoid injury.



Contact the County

300 West Tryon
Street
P.O. Box 8181
Hillsborough,
NC 27278
Phone: 919-732-8181

Contact the Webmaster.

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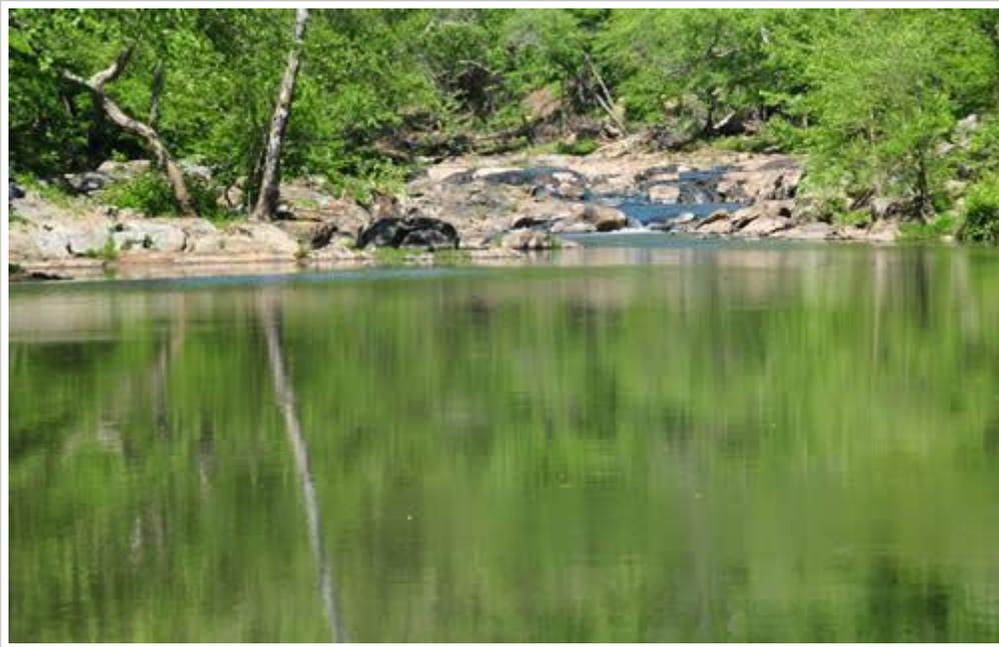
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Floodplain Information

Orange County has been a member of the National Flood Insurance Program (NFIP) since approximately 1976. In 1968 Congress created the NFIP to help provide a means for property owners to financially protect themselves from the possible damage of structures resulting from flood events. The program is intended to supplement typical homeowner insurance policies, which do not cover damage to structures resulting from a flood. The NFIP offers flood insurance to homeowners, renters, and business owners if their community participates, specifically through the adoption and enforcement of regulations designed to mitigate/reduce flood risk, in the program.



Flood Insurance Rate Maps (FIRM)

Part of the 'regulations' at our disposal are Flood Insurance Rate Maps (FIRM) denoting those areas of the County that are susceptible to flooding. The County utilizes these maps to verify the anticipated 'elevation' of flood waters during a storm event and works with property owners to ensure structures are not located in areas where flooding is a possibility. Through the enforcement of our flood damage prevention regulations, the County requires incorporation of design standards (i.e. elevation of structures and utilities, installation of flood vents, prohibition of specific activities, etc.) all in an effort to reduce the risk of loss during a flood.

Flood data can be accessed either on the County website at:

<https://gis.orangecountync.gov/orangencgis/default.htm>.

Additionally, flood map information can be viewed at the Flood Risk Information System (FRIS) website which can be accessed at: <https://fris.nc.gov/fris/>.

Community Rating System (CRS)

As part of this initiative the County chose to voluntarily participate in the Community Rating System (CRS) program in an effort to assist local residents secure affordable flood insurance. CRS is a voluntary, incentive based program, which is part of NFIP that recognizes and encourages community floodplain management activities exceeding minimum, established, development standards. It is through the adoption and enforcement of these 'heightened' development restrictions that local property owners receive a savings on their flood insurance premiums.

As part of our participation within the CRS program, the County is required to demonstrate those program activities we are engaging in to satisfy CRS requirements. These 'activities' include:

- Maintaining databases within identified flood prone areas
- Restricting and/or prohibiting development within identified flood prone areas
- Public outreach and education through annual mailings, the holding of information sessions for local resident to discuss floodplain regulations, and the offering of mapping services (i.e. creating maps denoting areas of property encumbered by flood plain) to local residents and property owners
- The maintenance of elevation certificates for flood prone property
- Requiring the incorporation of flood hazard mitigation techniques when developing property

Score

In 2018 the NFIP, on the behalf of FEMA, awarded Orange County a CRS score of 6 resulting in a discount of approximately 15% discount on flood insurance premium rates. Property owners receive this discount due to the County's efforts in achieving the three central goals of the CRS program, including:

- Reduce flood losses
- Facilitate accurate insurance rating
- Promote the awareness of flood insurance

Continued Effort

The County is committed to bolster our flood hazard mitigation program in a continuing effort to ensure affordable flood insurance for local residents. While we are unable to guarantee further reductions in insurance rates, we will continue our efforts to ensure preservation of the existing CRS rating and the aforementioned discount.

Review our [2020 CRS re-certification package \(PDF\)](#).

Outreach Letters

Copies of our 2020 outreach letters can be viewed using the following links:

- [Letter to property owners with flood insurance \(PDF\)](#)
- [Letter to property owners as well as insurance agents, lending institutions, surveyors, real estate agents, and developers describing the flood hazard mitigation services offered by Orange County \(PDF\)](#)

Map of Orange County Flood Hazards

You can use the Orange County Interactive GIS to locate your property. Just click on the floodplain overlay and you will see if your property is subject to flooding.

Floodplain Development Permit Requirements

A [Floodplain Development Permit \(PDF\)](#) is a required document for any disturbance within the floodplain prior to the starting any development activity, including, but not limited to:

- Building fences
- The clearing of land
- Constructing a barn or shed
- Installing a road or driveway
- Repairing or expanding an existing house or building

No new structures are allowed in the floodplain.



Contact the County

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Phone: [919-732-8181](tel:919-732-8181)

Contact the [Webmaster](#).

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Floodplain Management

Please know that having property located in or near an identified flood zone or more specifically a Special Flood Hazard Area (SFHA) does not inherently mean you cannot develop your property. There are steps you can take to mitigate your risk and, at the same time, ensure compliance with applicable flood regulations.

County Staff:

County planning staff can assist you determine where floodplains are located on your property and provide basic mapping services to delineate them. While this service does not take the place of procuring a professionally prepared site plan where a surveyor formally delineates floodplains on your property, staff can provide vital information such as the depth of anticipated flood waters and the location of any structure with respect to its proximity to identified floodplains.

The County has made available a variety of documents on existing flood data as well as guidelines and flood protection methods for you to review in several convenient locations including:

- The Orange County Public Library - Hillsborough Branch on Margaret Lane;
- The County Planning office located on the second floor of the West Campus Office building at 131 West Margaret Lane in downtown Hillsborough; and
- This website.

Consult the Planning Department

If you are thinking about engaging in land disturbing activity on your property for any reason (i.e. building a new structure, grading, removing trees, etc.) you should first consult the Planning Department to understand what issues, if any, the project may create. Staff will be more than happy to schedule a formal meeting with you, on site, to discuss specific flood issues associated with your property and identify opportunities to correct or prevent flood damage.

To aid you in addressing potential flood development issues on your property, the staff of the Orange County Planning Department offers the following services free of charge:

1. PROVISION OF MAPPING SERVICES / PREPARATION OF SITE ASSESSMENT(S):

County planning staff can assist you determine where floodplains are located on your property and provide basic mapping services to delineate them. While this service does not take the place of procuring a professionally prepared site plan where a surveyor formally delineates floodplains on  [Enable Google Translate](#)

provide vital information such as the depth of anticipated flood waters and the location of any structure with respect to its proximity to identified floodplains.

As a free service the Planning Department can prepare an environmental site assessment of your property. This assessment, which utilizes Orange County Geographic Information Service (GIS) data, is intended to identify environmental conditions that may restrict the overall development of a specific parcel of property.

Data provided on these assessments include, but are not limited to:

- The location of flood plain / special flood hazard areas / floodways on your property including the provision of the necessary information found on the Flood Insurance Rate Map (FIRM) needed to complete a flood insurance policy,
- Determining and denoting required floodplain buffers on your property,
- Identifying the location of streams and/or other protected water features including previously mapped wetlands. This includes identifying/denoting required stream buffers.
- Stream buffers is a generic term for the required buffer around various water features (i.e. streams, hydrologically connected water bodies, floodplains, wetlands, etc.) intended to be left in a natural state as part of our water quality guidelines/pollution protection measures as well as the preservation of the features natural drainage function,
- Identifying the required base flood elevation requirements for the property based on local land use regulations,
- Determining the depth of flooding on your property (i.e. how deep flood waters can be anticipated to be) in order to provide you with a better concept of the property's potential flood hazard,
- Identifying the location of existing structures with respect to their distance from identified SFHA's as well as their elevation using existing contour data,
- Required minimum setbacks for structures from property lines,
- Impervious surface limits for the property,
- Erosion Control and Stormwater management land disturbance thresholds, specifically focusing on identifying if an erosion control permit or a stormwater management plan will be required based on the anticipated/proposed level of land disturbance,
- The presence of conservation or utility easements impacting the location of structure and/or utility systems (i.e. well and septic), and
- Soil types on a property.

Staff is also able to provide electronic copies of flood maps and other similar data denoting flood prone areas on your property as part of this service.

During the preparation of this map staff identifies any and all regulations impacting the overall development of the property and provides direction on how you can address compliance.

Please remember to always check with the Planning Department before you initiate construction or land disturbing activities, or deposit fill material, on your property in order to avoid unnecessary problems with respect to compliance established regulations.

You do not need to schedule an appointment to obtain a site assessment, which any staff person can complete during normal business hours at our main office located on the second floor of the West Campus Office building located at 131 West Margaret Lane in downtown Hillsborough.

2. ASSISTANCE WITH FLOOD REGULATIONS:

The Planning Department is able to provide assistance, with respect to existing flood regulations and FIRM data, on the following:

- Base Flood Elevations as denoted on the most recent FIRM,
- 100 and 500 year floodplain maps,
- Archived FIRM maps and flood data,
- Cross section elevations at selected locations,
- Approximate location of parcel lines,
- Zoning and watershed overlay designations,
- 2 foot topographic contour lines,
- Approximate location(s) of structure(s) utilizing aerial photographic data,
- Any FIRM adjustment approved through the Letter of Map Amendment (LOMA) or Letter of Map revision (LOMR) process, and
- Elevation Certificates for certain parcels.

As previously indicated herein the County has made available a variety of documents on existing flood data and local guidelines. Staff will be more than happy to schedule a formal meeting to review any issues, concerns, or questions you may have regarding our flood program.

3. ADDITIONAL SERVICES:

In addition to the mapping services and review of applicable floodplain management regulatory standards as detailed above, staff is also available to assist with the following:

- Completion of complementary site visits to review your specific situation.
- Staff can make themselves available, during normal business hours, to complete a site visit of your property in order to identify current opportunities and constraints related to flood issues on your property.
- Please note staff likes to complete a site visit before compiling documentation outlining options with respect to protecting your property.
- Preparation of documents detailing specific advice/options on ways to protect your property (i.e. retrofitting/flood proofing of structures, drainage improvements, etc.), and

- Review of any and all available financial assistance programs to assist with development/redevelopment activities.

Elevation Certificate Archives

- [2006 \(PDF\)](#).
- [2007 \(A-M\) \(PDF\)](#).
- [2007 \(Mc-Z\) \(PDF\)](#).
- [Address-Searchable Table \(PDF\)](#).

Contact Us

Planning & Inspections

[Email an Inspector](#)

Physical Address

[View Map](#)

131 W Margaret Lane
Suite 201
Hillsborough, NC 27278

[Directions](#)

Mailing Address

P.O. Box 8181
Hillsborough, NC 27278

Phone: 919-245-2575

Fax: 919-644-3002

Hours

Monday - Friday

8 a.m. - 5 p.m.

Orange County Inspections: 919-245-2600 or 919-245-2601

Check our [Holiday Calendar](#) for variations in work hours, or the [Severe Weather Delays and Closings](#) page.

[Directory](#)

Quick Links

- [Floodplain Elevation Certificate Form and Instructions from FEMA](#)
- [Floodplain Development Permit \(PDF\)](#)
- [Administrative Procedures Regarding the Application of Flood Damage Prevention \(PDF\)](#)
- [Orange County Unified Development Ordinance](#)

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Property Protection Measures

Flood Proofing

There are several different ways to protect a building from flood damage. One way is to keep the water away by regarding your building is to site it outside of the floodplain and stream buffer. The Planning Department can provide you with information on floodplains and stream buffers.

Another opportunity is to retrofit the crawl space under your house. First, relocate any water heater, central air unit, or electrical fuse box from the crawl space to some other place in the house or attached garage. Next determine the location and number of hydrostatic vents that will be needed. The bottom of such venting cannot higher than one foot above the natural grade. The total vented area cannot be less than one square inch for every one square foot of crawl space wall subject to flooding. No less than two vents on different walls subject to flooding are required.

Hydrostatic pressure from floodwaters is a major cause of damages to residences. These vents serve to equalize the pressures on the walls by allowing floodwaters to move freely both into and out of the crawl space. Another approach would be to elevate the house above the base flood elevation. This method can become pricey, but in specific situations may work.

Planning Department

These opportunities are termed flood proofing. More information is available at the [Orange County Planning Department](#). Please note that any alteration to your property and building on your property requires a building permit from the Planning and Inspections Department.

Shut off the Gas & Electricity

If you know that flooding is imminent, you should shut off the gas and electricity and move valuable contents out of harms way. You may not receive much of a warning, so a detailed checklist prepared in advance would help ensure that you will not forget anything.

Services

A breakdown of the services we offer, with respect to understanding and identifying flood issues on your property, include:

Provision of Mapping Services/Preparation of Site Assessment(s)

County planning staff can assist you determine where floodplains are located on your property and provide basic mapping services to delineate them. While this service does not take the place of procuring a professionally prepared site plan where a surveyor formally delineates floodplains on your property, staff can provide vital information such as the depth of anticipated flood waters and the location of any structure with respect to its proximity to identified floodplains.

As a free service the Planning Department can prepare an environmental assessment of your property. This assessment, which utilizes Orange County Geographic Information Service (GIS) data, is intended to identify environmental conditions that may restrict the overall development of property.

Data provided on these assessments include, but are not limited to:

- The location of flood plain/special flood hazard areas/floodways on your property including the provision of the necessary information found on the Flood Insurance Rate Map (FIRM) needed to complete a flood insurance policy
- Determining and denoting required floodplain buffers on your property
- Identifying the location of streams and/or other protected water features including previously mapped wetlands. This includes identifying/denoting required stream buffers.
- Stream buffers is a generic term for the required buffer around various water features (i.e. streams, hydrologically connected water bodies, floodplains, wetlands, etc.) intended to be left in a natural state as part of our water quality guidelines/pollution protection measures as well as the preservation of the features natural drainage function
- Identifying the required base flood elevation requirements for the property based on local land use regulations
- Determining the depth of flooding on your property (i.e. how deep flood waters can be anticipated to be) in order to provide you with a better concept of the property's potential flood hazard
- Identifying the location of existing structures with respect to their distance from identified SFHA's as well as their elevation using existing contour data

- Required minimum setbacks for structures from property lines
- Impervious surface limits for the property
- Erosion Control and Stormwater management land disturbance thresholds, specifically focusing on identifying if an erosion control permit or a stormwater management plan will be required based on the anticipated/proposed level of land disturbance
- The presence of conservation or utility easements impacting the location of structure and/or utility systems (i.e. well and septic)
- Soil types on a property

Maps

Staff is also able to provide electronic copies of flood maps and other similar data denoting flood prone areas on your property as part of this service. During the preparation of this map staff identifies any and all regulations impacting the overall development of the property and provides direction on how you can address compliance.

Contact the Planning Department

Please remember to always check with the [Planning Department](#) before you initiate construction or land disturbing activities, or deposit fill material, on your property in order to avoid unnecessary problems with respect to compliance established regulations.

You do not need to schedule an appointment to obtain a site assessment, which any staff person can complete during normal business hours at our main office located on the second floor of the West Campus Office building located at 131 West Margaret Lane in downtown Hillsborough.

Assistance with Flood Regulations

The Planning Department is able to provide assistance, with respect to existing flood regulations and FIRM data, on the following:

- Base Flood Elevations as denoted on the most recent FIRM
- 100 and 500 year floodplain maps
- Archived FIRM maps and flood data
- Cross section elevations at selected locations
- Approximate location of parcel lines
- Zoning and watershed overlay designations
- 2 foot topographic contour lines
- Approximate location(s) of structure(s) utilizing aerial photographic data
- Any FIRM adjustment approved through the Letter of Map Amendment (LOMA) or Letter of Map revision (LOMR) process
- Elevation Certificates for certain parcels

As previously indicated herein the County has made available a variety of documents on existing flood data and local guidelines. Staff will be more than happy to schedule a formal meeting to review any issues, concerns, or questions you may have regarding our flood program.

Additional Services

In addition to the mapping services and review of applicable floodplain management regulatory standards as detailed above, staff is also available to assist with the following:

- Completion of complementary site visits to review your specific situation. Staff can make themselves available, during normal business hours, to complete a site visit of your property in order to identify current opportunities and constraints related to flood issues on your property. Please note staff likes to complete a site visit before compiling documentation outlining options with respect to protecting your property.
- Preparation of documents detailing specific advice/options on ways to protect your property (i.e. retrofitting/flood proofing of structures, drainage improvements, etc.)
- Review of any and all available financial assistance programs to assist with development/redevelopment activities



Contact the County

300 West Tryon
Street
P.O. Box 8181
Hillsborough,
NC 27278
Phone: 919-732-8181

Contact the Webmaster.

Helpful Links

[Legal Notices](#)
[Request Public Records](#)
[Public Participation Policy](#)
[Staff Directory](#)
[Intranet \(employees only\)](#)

Site Links

[Home](#)
[Site Map](#)
[Accessibility](#)
[Copyright Notices](#)
[Privacy Policy](#)
[Social Media Policy](#)

Stormwater & Drainage System Maintenance

There are easy, proactive, steps property owners can take to address and even abate potential flooding risks. Here are some steps local property owners can take to not only help themselves but others within identified floodplain areas:

Illegal Dumping

Do not dump or throw anything into ditches or streams. Dumping grass clippings, leaves, trash, yard debris, etc. can accumulate and plug ditches, culverts, and channels thereby increasing the risk of flooding during storm events as rain water will have nowhere to go. The dumping of this material could also put you in violation of several County regulations and subject you to enforcement action. You are encouraged to keep any ditch on your property clear of brush and debris to avoid unnecessary flooding during a storm event.

Property Alterations

Always check with the Planning Department before you build on, alter re-grade, or add fill material to your property. Not only are permits typically required for such activities, staff liked to review the potential said impacts can have with respect to increasing a properties susceptibility to inundation by flood waters.

Additional Information

If you witness dumping of materials into a stream or drainage ditch, or if you need assistance in reviewing a development project on your property, please call the Planning Department at: 919-245-2575.



Contact the County

300 West Tryon
Street
P.O. Box 8181

Helpful Links

[Legal Notices](#)
[Request Public Records](#)
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Site Links

[Home](#)
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Substantial Improvement / Damage Requirements

Should you wish to make improvements to your existing house or buildings, you may have to follow the County standards for substantial improvements or substantial repair to the structure.

Substantial Improvement

Substantial improvement is any combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during any one year period whereby the cost of which equals or exceeds 50% of the market value of the structure before the start of construction of the improvement. This term includes structures, which have incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include either any correction of existing violations of State or Orange County health, sanitary, or safety code specifications which have been identified by the Orange County code enforcement official and which are the minimum necessary to assure safe living conditions, or any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

Substantial Damage

Substantial damage is damage of any origin sustained by a structure during any one year period whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred. Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25% of the market value of the structure before the damage occurred.

Additional Information

For additional assistance or questions, please feel free to contact the local Floodplain Manager in the Orange County Planning and Inspections Department by telephone at 919-245-2577, by email, or in person any time from Monday to Friday during normal business hours (8 a.m. to 5 p.m.), at:

131 W Margaret Lane
Hillsborough, North Carolina 27278

Activity 360

ORANGE COUNTY, NORTH CAROLINA

COMMUNITY RATING SYSTEM (CRS) RECERTIFICATION – AUGUST 2022

ACTIVITY 360 – FLOOD PROTECTION ASSISTANCE:

The County engages in community outreach and provides individual assistance to property owners/developers when development applications are submitted/proposed. Staff also routinely engages in outreach/meetings with property owners offering guidance/advice on addressing flood/positive drain issues with respect to developed property.

As indicated under **Activity 310**, we have not had a project within the last year requiring the submittal of an Elevation Certificate.

The County provides additional mapping services for all property owners, realtors, developers, etc. outlining the development opportunities and constraints on a given parcel of property. This service is referred to as a 'Zoning Report'.

The assessment provides flood information including, but not limited to:

- Location of property within the SFHA,
- Required finished floor elevation (FFE) requirements including County freeboard requirement,
- Required flood buffer (the natural area surrounding a SFHA that has to be left in a natural state per Section 6.13.3 of the UDO),
- FIRM panel number for the property and community information;
- Flood depth at structure (if applicable).

A typical Zoning Report, as well as additional detail on our mapping services, is contained in:

Activity 320 contains an example Zoning Report as well as an example letter of a Floodplain Development Permit (FDP) used as correspondence with property owners/applicants.

Activity 330 contains copies of the annual letter(s) the County send advertising our services related to floodplain management. Further Activity 330 contains a breakdown of website resources including the numerous brochures and information packets the County maintains.

Activity 350 contains screen shots of our existing website providing details on our floodplain management program as well as information on floodplain regulation(s) in general.

Activity 430 contains a memorandum outlining the qualification(s) of County staff.

FLOOD SAFETY:

Here are some tips to remember during flood conditions:

1. **Do not walk through flowing water.** Drowning is the number one cause of flood deaths, mostly during flash floods. Currents can be deceptive. If you walk in standing water, use a pole or stick to ensure that the ground is still there;
2. **Do not drive through a flooded area.** More people drown in their cars than anywhere else;
3. **Stay away from power lines and electrical wires.** The number two flood killer after drowning is electrocution. Electrical current can travel through water. Report downed power lines to the Piedmont Electric or Duke Power and to the County Emergency Management office;
4. **Have your electricity turned off by the utility company.** Some appliances, such as television sets, keep electrical charges even after they have been unplugged. Do not use appliances or motors that have gotten wet unless they have been taken apart, cleaned, and dried;
5. **Look out for animals, especially snakes.** Small animals that have been flooded out of their homes may seek shelter in yours. Use a pole or stick to poke and turn things over and scare away small animals;
6. **Look before you step.** After a flood, the ground and floors are covered with debris including broken bottles and nails. Floors and stairs that have been covered with mud can be very slippery;
7. **Be alert for gas leaks.** Use a flashlight to inspect for damage. Do not smoke or use candles, lanterns, or an open flame unless you know the gas has been turned off and the area has been ventilated;
8. **Develop an emergency flood event checklist** You may not receive much of a warning when a flood event hits, so develop a detailed checklist prepared in advance would help ensure that you will not forget anything. This would include shutting of gas lines, unplugging non-essential electrical items, an emergency food/medicine kit, etc.

WE NEED YOUR ASSISTANCE:

Here are some helpful steps that can be taken by citizens to offset the potential damage created during flood events:

1. **Help protect the natural functions of a floodplain:** Do not dump or throw anything into the ditches or streams.

Even grass clippings and branches can accumulate and plug channels and culverts. A plugged channel cannot carry water and when it rains the water has to go somewhere. Every piece of debris contributes to flooding somewhere downstream. **If your property is next to a ditch or stream, please do your part and keep the stream channel and banks clear of trash, brush and debris.**

2. If you see others dumping trash, debris, or even yard waste in a ditch or stream please report it to us at 919 245 2575;
3. Always check with the Building Division before you build on, alter, regrade, or fill on your property. A permit may be required to ensure that projects do not cause flood problems on other properties;
4. If you see building or filling without a County building permit posted, contact us at 919 245 2575 as quickly as possible;
5. If you see broken silt fencing on a construction site contact us at 919 245 2575 as quickly as possible. Silt fencing is valuable in helping to prevent soil/sediment from running into our streams;
6. Remember: the County maintains an electronic library of information on flood proofing, flood insurance and flood safety, which can be accessed at:

<https://www.co.orange.nc.us/1309/Floodplain-Information>.

Staff is also available for consultations as needed.

For more information on the County's floodplain program you may use the following web link:

<https://www.co.orange.nc.us/1309/Floodplain-Information>.

Or contact us at:
PHONE (919) 245-2575
FAX: (919) 644-3002

E-mail: csandt@orangecountync.gov

FLOOD ISSUES:

Understanding Orange County Services



**ORANGE COUNTY
PLANNING AND INSPECTIONS
DEPARTMENT -
Current Planning Division**

FLOOD EVENTS HAPPEN HERE

It may be hard to believe but flooding can occur within the Piedmont region of North Carolina and Orange County is certainly not immune.

Floods are dangerous. Moving water as shallow as two feet can knock a grown man off his feet and float a car.

For those properties that contain identified flood prone areas, property owners should taken additional precautions to avoid the negative impacts that can be generated during a storm event. While you may not be able to plan for every contingency, there are certain steps that you can take to negate the potential impact flooding can have on your property.

PLANNING CAN HELP!

Orange County Planning can assist you in addressing potential flood issues on your property including:

1. Determining the location of flood plain/special flood hazard areas/floodways on your property including the provision of the necessary information found on the Flood Insurance Rate Map (FIRM) needed to complete a flood insurance policy;
2. Determining and denoting required floodplain buffers on your property;
3. Determining the approximate depth of flooding on your property (i.e. how deep flood waters can be anticipated to be) in order to provide you with a better concept of the property's potential flood hazard;
4. Providing electronic copies of flood maps and other similar data denoting flood prone areas on your property;
5. Providing assistance in determining the location of a specific structures elevation within a floodplain and provide you assistance on obtaining an elevation certificate;
6. Providing the location of water/drainage features on a parcel of property in an effort to work with you to preserve their natural drainage functions; and
7. Providing you with available mapping data denoting the location of wetlands on your property.

This information is available on what we refers to as a 'Site Assessment'. There is no charge for this service and no appointment is necessary. Maps can be completed in about 20 minutes by staff during normal business hours.

ADDITIONAL SERVICES:

In addition to the mapping services detailed above, Planning staff is also available for the following:

- Completion of complementary site visits to review your specific situation,
- Preparation of documents detailing specific advice/options on ways to protect your property (i.e. retrofitting/flood proofing of structures, drainage improvements, etc.), and
- Review of any and all available financial assistance programs to assist with development/redevelopment activities.

WHAT YOU SHOULD DO WHEN CONSIDERING CONSTRUCTION:

If you are thinking about building on your property, you should first consult with the Planning Department. Upon your request, staff members can visit your property to discuss your specific flood issues and explore opportunities to either correct or negate the situation with the goal of preventing damage as the result of flooding.

Flood Proofing: There are several different ways to protect a building from potential flood damage, including:

1. With respect to new construction, have the structure elevated above the base flood elevation to ensure it will not be inundated during flood events or install flood vents to allow for floodwaters to pass under a structure,
2. The grading (new development) or re-grading your property outside of the floodplain and protected stream buffers to channel water away from a structure,
3. Retrofit the existing crawl spaces under a residence by installing hydrostatic vents around the base of the structure.. Hydrostatic pressure from floodwaters is a major cause of damages to residences. These vents serve to equalize the pressures on the walls by allowing floodwaters to move freely both into and out of the crawl space. This option will, however, require the relocation of electrical equipment and HVAC systems.
4. Where practical, existing structures could be elevated above the base flood elevation. While potentially expensive, this option may be best suited to avoid future damage to a structure resulting from flood events.

Please note that any alteration to any building located on the property, or any alteration to your property in general, will require a permit from the Planning and Inspections Department before the commencement of work. Staff will be more than happy to assist you through the permit application and approval process and offer guidance on various options as detailed herein.

BUY FLOOD INSURANCE:

If you do not have flood insurance, the County strongly encourages you to talk with your insurance agent in order to understand the potential benefits of flood coverage.

Homeowner's insurance policies do not cover damage from flooding. As Orange County is a participant in the National Flood Insurance Program, you can purchase a separate flood insurance policy for your property. This insurance is backed by the federal government and is available to everyone, even for properties that have been flooded before.

Some people have purchased flood insurance because the bank required it when they got a mortgage or home improvement loan. Usually these policies just cover the building's structure and not the contents. During the kind of flooding that happens here in Orange County, the furniture and house contents can also be damaged.

At present there are approximately 70 flood insurance policies in effect throughout the unincorporated portions of Orange County. If you are covered, double check that the building coverage is adequate and make sure you have content coverage. Even if you think you have covered all your bases flood-wise, the next flood could be worse than Hurricane Fran was in 1996. Flood insurance covers all surface flooding.

Please do not wait to the next hurricane to buy flood insurance. There is a thirty-day waiting period before the policy takes effect. Contact your insurance agent for more information on rates and coverage.

BUILD RESPONSIBLY:

Before engaging in development activity, consult with the Planning Department to understand development opportunities and constraints for your property. As a reminder, the County prohibits development activity within identified Special Flood Hazard Areas (including placement of fill material and/or grading activities).

Also as you are finalizing proposed grading activities, staff encourages property owners to maintain natural grade within required setback areas (i.e. 40 ft. from a front property line and 20 ft. from side/rear property lines) to preserve existing drainage patterns.

The County Inspections Department enforces State building code requirement(s) requiring positive drainage away from residential/non-residential structures as part of the construction process.

Activity 420

ORANGE COUNTY, NORTH CAROLINA
COMMUNITY RATING SYSTEM (CRS) RECERTIFICATION – AUGUST 2022
ACTIVITY 420 – OPEN SPACE PRESERVATION:

The County continues to implement:

1. A proactive program requiring/mandating the preservation of the SFHA as open space either as part of individual parcel development or through our subdivision program. Staff has included copies of our subdivision regulations denoting SFHA is required to be kept as open space.
2. A proactive program working with numerous partners for the preservation of open space/prime farm land/forest space throughout the County.

Stream buffer requirements, inclusive of SFHA buffers, are contained in Section 6.13 of the UDO. Open space standards/requirements are contained in Section 7.13.3 of the UDO. The County UDO can be accessed here:

<https://www.orangecountync.gov/DocumentCenter/View/8305/Unified-Development-Ordinance-PDF>.

SECTION 6.13: STREAM BUFFERS

6.13.1 Purpose

The purpose of the regulations included in this Section is to protect County water resources by establishing minimum buffers adjacent to streams, rivers, water bodies and other water features and limiting development and other land disturbing activities within those buffers.

6.13.2 Applicability

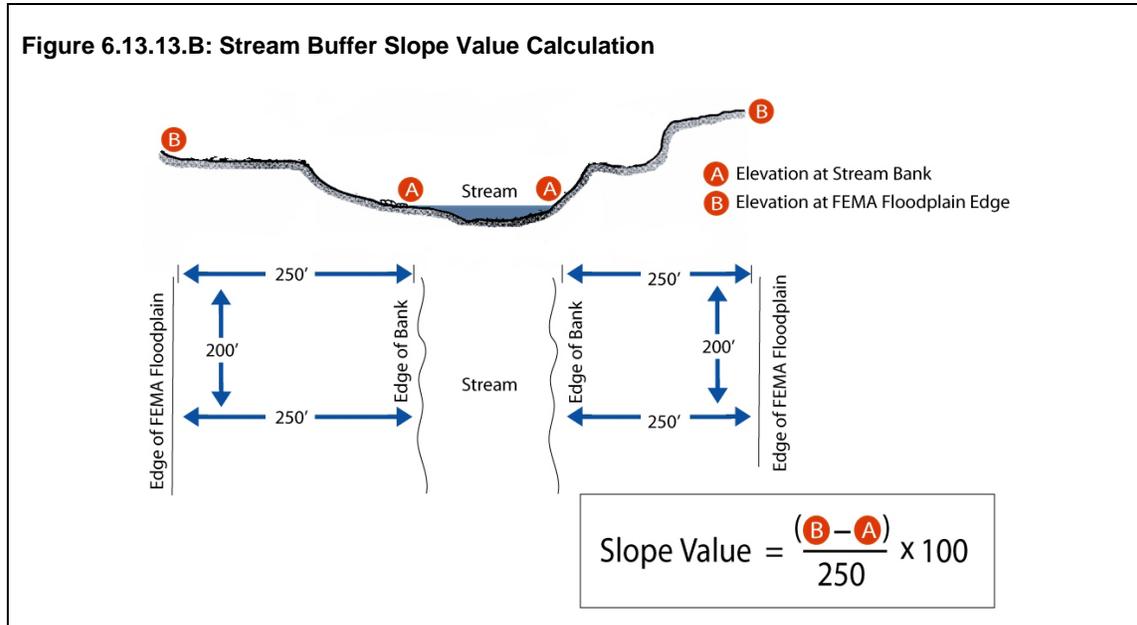
The stream buffer regulations and standards contained herein shall be applicable to all streams and water features, as follows:

- (A) Streams identified by any of the following means:
 - (1) Shown as solid blue lines or as broken blue lines on the USGS Quadrangle maps,
 - (2) Shown as water feature in the Orange County Soil Survey, or
 - (3) A water feature identified by a field determination of County staff trained in surface water identification through the North Carolina Division of Environmental Quality (NCDEQ).
- (B) Stream buffers shall extend around the perimeter of all water features if any portion of the stream buffer of a stream touches the water feature. Disputes pertaining to water feature decisions by County staff shall be filed directly to the NCDEQ.

6.13.3 Calculating Width of Stream Buffer

- (A) **Special Flood Hazard Areas**
 - (1) Those streams identified by FEMA as having floodplains shall have stream buffers calculated from the outside edges of the 100-year floodplain.
- (B) **Calculating Slope Value**
 - (1) Draw 250' length perpendicular lines, at 200-foot horizontal intervals along the entire length of the outside edges of the stream, or the outer edge of the FEMA floodplain, whichever is greater.
 - (2) Determine the elevation at either the stream bank or the outer edge of the FEMA floodplain, whichever is highest (Elevation 1), and at the point 250' from the stream or FEMA floodplain, whichever is applicable, along the perpendicular line (Elevation 2).
 - (3) Subtract Elevation 1 from Elevation 2 for the Difference.
 - (4) Divide the Difference by 250 for the Mean.
 - (5) Multiply the Mean by 100 to determine the "Slope Value".
 - (6) Perform this calculation for both sides of the stream or floodplain.

Figure 6.13.13.B: Stream Buffer Slope Value Calculation



(C) Method A – Stream Buffer Based on Slope and Groundcover

- (1) The width of the buffer shall be a minimum of 50 feet from each edge of the floodplain or stream bank.
- (2) An additional 15 feet shall be added to the 50-foot buffer (65 feet total) where the slope value is less than 7.5%, as measured 250 feet from the edge of the floodplain or stream bank.
- (3) For slope values 7.5% and greater, as measured 250 feet from the edge of the floodplain or stream bank, an additional 30 feet shall be added to the 50-foot buffer (80 feet total).
- (4) These calculations shall be made for both sides of either the stream bank or floodplain, whichever is greater.

(D) Method B - Stream Buffer Based on Slope and Groundcover

TABLE 6.13.3.D: STREAM BUFFER WIDTH BASED ON SLOPE AND GROUNDCOVER [1]		
SLOPE VALUE	TYPE OF GROUNDCOVER	
	GRASS (FEET)	WOODS (FEET)
2 to 4.9	100	50
5 to 9.9	150	100
10 to 14.9	200	100
15 or greater	250	150

[1] In addition to the buffer zone resulting from the calculations below, a stream buffer shall include any portion of a floodplain as defined in this Ordinance, by special survey by a registered engineer or surveyor, or by alluvial soils as designated in the Orange County Soils Survey.
[2] The required stream buffer zone shall not be limited to one calculation, but shall be based on calculations made at points where topographical and ground cover conditions change based on an analysis of the site.

6.13.4 Minimum Buffer Widths for Watershed Protection Overlay Districts

(A) University Lake Critical Area (UNIV-CA)

- (1) The buffer width adjacent to streams shall be calculated for both Method A and Method B, and at any given point along the stream, the width of the buffer shall be the larger of the two.
 - (2) The same method shall be used to calculate the buffer around the reservoir itself. New structures shall be located at least 150' from the reservoir or outside of the stream buffer, whichever is greater.
- (B) University Lake Protected Watershed (UNIV-PW)**
- (1) The buffer width shall be calculated for both Method A and Method B, and at any given point along the stream, the width of the buffer shall be the larger of the two.
- (C) Cane Creek Critical Area (CANE-CA) & Upper Eno Critical Area (U-ENO-CA)**
- (1) The buffer width adjacent to streams shall be the width calculated using Method A.
 - (2) Method A shall also be used to calculate the buffer around the reservoir itself. New structures shall be located at least 150' from the reservoir or outside of the stream buffer, whichever is greater.
- (D) Upper Eno Protected (U-ENO-PW), Lower Eno Protected (L-ENO-PW) & Back Creek Protected (BACK-PW)**
- (1) The buffer width shall be as calculated using Method A, or 150', whichever is less, except where density exceeds 1 du/ac and impervious surface exceeds 12%.
 - (2) Where density exceeds 1 du/ac and impervious surface exceeds 12%, the buffer width shall be calculated as above, but shall not be less than 100'.
- (E) Cane Creek Protected (CANE-PW), Little River Protected (LITTLE-PW), South Hyco Creek Protected (HYCO-PW), Flat River Protected (FLAT-PW), Haw River Protected (HAW-PW) & Jordan Lake Protected (JORDAN-PW)**
- (1) The buffer width shall be the width calculated using Method A, or 150', whichever is less.

6.13.5 Areas Outside of Watershed Protection Overlay Districts

- (A)** In areas not identified on the Official Zoning Atlas as Watershed Protection Overlay Districts, a stream buffer a minimum of 50 feet in width shall be established along both sides of streams identified per Section 6.13.2.
- (B)** Stream buffers for Soil Survey streams shall only be calculated using Method A as explained in Section 6.13.3.

6.13.6 Uses Allowable Within Stream Buffers

- (A) General Standards**
- (1) Prior to any land disturbing activity within a designated stream buffer, the property owner shall provide written notification of the location and nature of the proposed use to the Planning Department for review. The notification shall state that the use shall be designed, constructed, and maintained to minimize soil disturbance and to provide the maximum water quality protection practicable.
 - (2) All land disturbing activities within a designated stream buffer require approval of the Erosion Control Officer in accordance with applicable State and local regulations, as well as all other required local, State and/or Federal permits and approvals prior to commencement of land disturbing activities.
 - (3) The submittal of additional information and/or applications may be required prior to any land disturbing activity within a designated stream buffer, in accordance with the provisions of this Ordinance.

(B) Additional Standards for Uses Allowable With Mitigation

- (1) Development proposals shall be submitted and reviewed in accordance with this Ordinance and all applicable State regulations.
- (2) Mitigation shall be provided in accordance with adopted State standards and shall be approved and inspected by the Erosion Control Officer or his/her designee.

(C) Uses Allowable

The following uses are allowed as a matter of right in stream buffers, subject to the General Standards established in Section 6.13.6(A), and any specific standards for the use:

- (1) Above-ground and buried utility lines for local distribution of electricity, telephone, data, and cable television service, as well as accessory and appurtenant apparatus such as poles, guy wires, transformers and switching boxes.
- (2) Individual or community wells.
- (3) Public water and sewer lines are permitted only as allowed by the Orange County Water and Sewer Policy, and may be located within stream buffers only to the extent necessary to cross the stream buffer as closely as possible to perpendicular. Individual or community wastewater disposal systems are not permitted in stream buffers.
- (4) Public and private streets, bridges, railroad rights-of-way, and other similar travel ways, provided that they enter and exit the buffer area as nearly perpendicular as possible.
- (5) Archaeological activities/projects conducted in accordance with all applicable County, State and Federal regulations.
- (6) Dam/reservoir maintenance activities.
- (7) Maintenance of existing outfalls provided they are managed to minimize the sediment, nutrients, and other pollution that convey to waterbodies.
- (8) Driveway crossings on single-family residential lots that disturb less than, or equal to, 25 linear feet or 2,500 square feet of stream buffer.
- (9) Greenways and/or hiking trails six feet in width composed of natural materials at least 30 feet from the top of bank of a stream or water body.
- (10) Historic preservation projects/activities.
- (11) Periodic maintenance of modified natural streams, such as canals, and a grassed travel way on one side of the surface water when alternative forms of maintenance access are not practical.
- (12) Public water and sewer lines that do not disturb over 40 linear feet.
- (13) Stream restoration and/or stream bank stabilization.
- (14) Wetland restoration, in accordance with all applicable County, State and Federal regulations.
- (15) Vegetation management, including but not limited to:
 - (a) Emergency fire control measures provided that topography is restored;
 - (b) Planting vegetation to enhance the riparian buffer;
 - (c) Pruning forest vegetation provided that the health and function of the forest vegetation is not compromised and the pruning activity is conducted by hand;

- (d) Removal of individual trees which are in danger of causing damage to dwellings, other structures or human life provided the activity is conducted by hand; and
- (e) Removal of poison ivy and other nuisance vegetation, including invasive exotics, as identified by the NC Cooperative Extension.

(D) Uses Allowable With Mitigation

The following uses are allowable within stream buffers with mitigation, subject to the standards established in Sections 6.13.6(A) and 6.13.6(B) above, as well as any specific standards for the use:

- (1) Water dependent structures, such as docks, piers, public and private boat ramps, boat houses over the water, walkways, water recreational amenities, and other similar uses.
- (2) New drainage outfalls provided that a stormwater management facility is installed to control nutrients and attenuate flow before the conveyance discharges into the stream buffer.
- (3) Driveway crossings on single-family residential lots that disturb less than, or equal to 150 linear feet or 1/3 of an acre of stream buffer.
- (4) Any driveway or roadway, whether for a single-family residence or a subdivision, that is parallel to the stream or water body, regardless of cumulative impact.
- (5) Greenways and/or hiking trails six feet in width, with improved paths (i.e. paved, wood decking, etc.) at least 30 feet from the top of bank of a stream or water body.
- (6) Trail crossings, and associated bridge or other structure, provided they are oriented perpendicular to the stream and constructed in accordance with best management practices to minimize soil erosion and other adverse impacts to water quality.
- (7) Public water and sewer lines that disturb over 40 linear feet, but not greater than 150 linear feet of riparian buffer.
- (8) Temporary roads intended for access to a property for development purpose.
- (9) New stormwater management ponds, with or without a riparian buffer established adjacent to the pond.
- (10) Vegetation Management that includes the installation of new vegetation and a one-time application of fertilizer to re-establish the vegetation.
- (11) Vegetation Management / Replanting in an effort to protect existing structures.

6.13.7 Diffuse Flow Requirement

- (A) Diffuse flow of runoff shall be maintained in the stream buffer by dispersing concentrated flow and re-establishing vegetation.
- (B) Concentrated runoff from new ditches or constructed conveyances shall be converted to diffuse flow before the runoff enters the stream buffer.
- (C) Periodic corrective action to restore diffuse flow shall be taken if necessary to impede the formation of erosion gullies.

6.13.8 Land Disturbance and Planting of Vegetation

- (A) Area within a stream buffer which is subject to serious erosion may be disturbed for the purpose of planting and maintaining erosion-resistant vegetative cover.

- (B) Existing forested areas or any other healthy vegetation may not be removed from a stream buffer, except where replaced with vegetation resulting in comparable stormwater runoff velocity and quantity one year after planting.
- (C) New vegetation shall be planted to capture non-source pollutants before they reach the perennial stream, as per applicable Orange County Standards.

SECTION 6.14: STORMWATER MANAGEMENT

6.14.1 Introduction

As a watershed becomes more developed, the amount of impervious surface increases, causing a decrease in the rate at which stormwater runoff which can be absorbed into the soil. This results in more stormwater flowing directly into streams and other water bodies. Because this direct runoff has not been filtered through the soil, pollutants from the air and land surface enter streams and increase the potential for pollution of drinking water supplies.

6.14.2 Purpose

The purpose of the Board of County Commissioners in adopting stormwater regulations is to protect the water quality of the streams that lie within Orange County by reducing and controlling stormwater runoff and addressing nutrient reductions for both new and existing development.

6.14.3 Jurisdiction-Wide and Inter-Local Approaches

- (A) Orange County shall have the option of implementing jurisdiction-wide and/or inter-local approaches to control stormwater runoff and achieve nutrient reductions.
- (B) Any jurisdiction-wide and/or inter-local approaches must be approved by the Orange County Board of Commissioners, and the Environmental Management Commission before implementation.

6.14.4 General Methods

The following general approaches shall be utilized to minimize the effects of stormwater pollution on drinking water supplies in Orange County:

- (A) **Non-Structural Stormwater Control Measures (SCMs)**
 - (1) The stormwater run-off generated by one inch of rain from all project area surfaces shall be controlled to the extent possible through on-site infiltration and through the use of methods which rely on natural soil properties for absorption and treatment.
 - (2) Run-off from roads, parking lots, and/or sidewalks shall be directed to undisturbed areas through use of berms, grassed diversion ditches or swales, or other acceptable means to reduce run-off velocity and filter out pollutants.
 - (3) **Impervious Surface Limits**
 - (a) In order to promote infiltration of stormwater runoff into the soil and minimize direct and immediate runoff into streams and water supply impoundments, the maximum percentage of the total lot area which may be covered with an impervious surface shall be specified. This limit is referred to as the "impervious surface ratio".
 - (b) Impervious surface calculations for an individual development shall be cumulative for original construction and any subsequent additions. One-half of the width of any of any existing or proposed road adjacent to an individual lot shall be included as impervious surface for that lot, except in the case where an existing road was contained within a dedicated public right-of-way at the time that the watershed regulations were first applied to the watershed within which the development is located.

- (i) Public or private community water supply systems,
 - (ii) Public or private community sewage disposal systems, and
 - (iii) Storm drainage facilities, including existing and proposed drainageways and channels.
- (b) Any easements associated with such utility systems shall also be denoted and the purpose for the easements designated on the plat.

(7) Landscaping and Buffer Data

The following information shall be denoted on the Preliminary Plat to demonstrate compliance with the provisions of Section 6.8 of this Ordinance:

- (a) Existing trees and/or vegetation to be preserved and proposed trees and/or landscape materials to be installed.
- (b) Required buffers.

(8) Special Flood Hazard Area (SFHA) Standards

- (a) The boundary of the SFHA shall be designated and labeled on the plat as required by this Ordinance.
- (b) For subdivisions located within a Watershed Protection Overlay District, as identified on the Orange County Zoning Atlas, the following information shall be designated and labeled on the plat:
 - (i) Impervious surface data as required by Section 4.2 of this Ordinance;
 - (ii) Stream buffers as required by Section 6.13 of this Ordinance; and
 - (iii) Stormwater detention and/or retention sites and undisturbed areas for infiltration purposes as required by the Section 6.14 of this Ordinance.

7.13.3 Final Plat Specifications

(A) Plat Preparation

- (1) The Final Plat shall be drawn in accordance with the requirements of G.S. 47-30 as amended and to the specifications of this Section. The plat shall be prepared by a Professional Land Surveyor at a scale of not less than 100 feet to the inch nor more than 20 feet to the inch.
- (2) All Final Plats shall be prepared in accordance with the Manual of Practice for Land Surveying in North Carolina as prepared by the North Carolina State Board of Registration for Professional Engineers and Land Surveyors.

(B) Title Block

A title block shall be placed on the plat, which shall contain the following information:

- (1) The name of the subdivision, preceded by the words "Final Plat of _____", which shall not duplicate nor closely approximate, phonetically or in spelling, the name of any other subdivision in Orange County, and, where the plat at hand is only part of a larger subdivision bearing the same name, the unit or section number of other necessary identification;
- (2) The graphic scale in feet per inch in words or figures and bar graph; a north arrow accurately positioned and designated as magnetic north, true north, North Carolina State Plane Coordinate Grid System North or north referenced to a recorded instrument with the recording reference shown; the date or dates the survey was conducted; and any other pertinent legend data;

- (3) State, county and township location; tax map, Parent PIN, block and lot number references; and deed book and page number citations for the property being subdivided; and
- (4) The name and address of the owner(s) of the land being subdivided; the name and address of the subdivider if other than the owner; and the name and address, registration number and seal of the land surveyor responsible for preparation of the plat.

(C) Vicinity Map

- (1) A vicinity map showing the general location of the subdivision in relation to the surrounding area shall be placed on the plat.
- (2) The vicinity map shall be drawn at a sufficient size to show the relationship of the tract to the existing street or highway system and readily recognized Orange County landmarks.
- (3) The vicinity map shall show the street names in addition to the State Road (S.R.) designations.

(D) Existing Site Data

Information on existing conditions shall be shown as noted below.

(1) Boundary Lines

- (a) The location, distance and bearings for the boundary line of the tract to be subdivided.
- (b) Areas not designated as lots that will be under common ownership such as a conservancy, public agency or similar entity or a homeowners' association's ownership shall be appropriately labeled as tracts.
- (c) Locations of corporate limits or Extraterritorial Zoning Jurisdiction (ETJ) lines, township boundaries, and county lines.
- (d) The names of owners and Parcel Identification Numbers (PIN) of adjacent land.
- (e) For adjacent land that is platted, the subdivision plat name, plat book and page number abutting the tract to be subdivided shall also be shown.

(2) Other Conditions

- (a) If any portion of the final plat includes land referenced in the "Inventory of the Natural Areas and Wildlife Habitats of Orange County, North Carolina" it shall be shown on the plat.
- (b) Constructed features including houses, barns, sheds, railroads and overhead utility lines.
- (c) Cemeteries if designated either by a previously recorded instrument or if disclosed to or found by the surveyor during the course of the survey.
- (d) All street rights-of-way, which adjoin the boundaries of the tract being subdivided, shall be shown with dashed lines and shall denote the right-of-way location and width.

(E) Subdivision Layout Data

The lot design plan shall be drawn and shall show the following information:

(1) Lot Arrangement and Development Potential

- (a) The lot lines, Parent Parcel Identification Number, and lot and block numbers of each lot shall be shown on the plat.

- (b) Blocks shall be consecutively numbered or lettered in alphabetical order and, all lots in each block shall be consecutively numbered.
- (c) Lot and block numbers provided shall be in substantial compliance with those shown on the approved Preliminary Plat.
- (d) The location and dimensions of all lot lines, all new easements and any existing easements which are recorded or easements which are visible and apparent reservations, and areas dedicated to public or private use with notes stating their purposes shall be shown on the Final Plat.
- (e) Lots shown on the Final Plat shall be substantially the same as those shown on the approved Preliminary Plat.
- (f) Front, rear, and side yard setbacks that are greater than the minimum setback requirements of the district in which the parcel is located shall be designated with dashed lines on the individual lots and labeled as 'Minimum Setback'.
- (g) All lots which are of restricted development potential shall be noted on the Final Plat with reference to a separate recorded instrument which describes the restricted lot(s) by metes and bounds and designates the lot as "Of restricted development potential because of (specify condition), pursuant to Section 7.6.3 of the Orange County Unified Development Ordinance".

(2) Streets and Transportation Systems

- (a) The location, dimensions and classification (public or private) of all streets, new easements or any existing easements which are recorded or which are visible and apparent uses, alleys and other public or private ways shall be shown on the Final Plat, including pedestrian and non-motorized vehicle easements.
- (b) All streets intended for future extension either within or beyond the boundaries of the subdivision shall clearly be indicated on the Final Plat by the words, "Subject to future extension".
- (c) A No Vehicular Access Easement (NVA) (aka Negative Access Easement) 10 feet in width shall be designated, with a dashed line, along the right-of-way of all lots and tracts where direct vehicular access to a roadway is not approved.
- (d) Street names, including State road numbers if applicable, shall be indicated on the Final Plat and shall not duplicate or approximate the name of any other street in Orange County, or an adjacent County if a similar street name is in use in the vicinity, except where a street is the continuation or extension of an existing street.
- (e) All street names shall be approved through the Orange County Land Records office.

(3) Utility and Drainage Data

- (a) Construction plans shall be submitted to proper authorities, as required, to document any new:
 - (i) Public or private community water supply system,
 - (ii) Public or private community sewage disposal system, and/or
 - (iii) Storm drainage facilities.
- (b) Written approval of the reviewing authorities and a set of approved construction plans shall be submitted to the Planning Department prior to approval of the Final Plat.

- (c) The location and purpose of all new easements for utility systems shall be shown on the Final Plat, including, but not limited to,:
- (i) Sanitary sewers,
 - (ii) Septic tanks and nitrification fields,
 - (iii) Storm sewer lines,
 - (iv) Water mains,
 - (v) Gas, transmission mains,
 - (vi) Overhead electric, telephone and CATV transmission mains, and
 - (vii) Any other above or below ground utility systems which are contained within a designated easement.
- (d) It is understood that utility distribution systems to individual lots for gas, electric, telephone, and TV cable service are customarily covered by “blanket easements” or “general easements”. If these easements have been recorded, the recording data shall be shown on the plat. Otherwise, these easements need not be denoted on the plat.

(4) Landscaping and Buffer Data

Buffers widths and locations as required by Section 6.8 of this Ordinance shall be shown on the Final Plat and specified in a separate document to be recorded concurrently with the Final Plat. The Deed Book and Page reference shall be noted on the Final Plat.

(5) Special Flood Hazard Area (SFHA) Standards

- (a) The boundary of the SFHA shall be designated and labeled on the plat as required by this Ordinance.
- (b) For subdivisions located within a water supply watershed of regional and/or local importance, the following information shall be shown on the Final Plat:
- (i) The maximum impervious surface data as required by Section 4.2 of this Ordinance shall be shown for each lot.
 - (ii) Stream buffers as required by Section 6.13 of this Ordinance shall be delineated with widths noted on the Final Plat.
 - (iii) Development restrictions within the stream buffer shall be specified in a separate document to be recorded concurrently with the Final Plat. The Deed Book and Page reference shall be noted on the Final Plat.
 - (iv) Storm water detention and/or retention sites and undisturbed areas for infiltration purposes as required by Section 4.2 and 6.13 of this Ordinance shall be delineated and labeled on the Final Plat.
 - (v) Any restrictions or requirements associated with the detention/retention sites shall be specified in a separate document to be recorded concurrently with the Final Plat. The Deed Book and Page reference shall be noted on the Final Plat.

(6) Open Space and Natural and Cultural Resource Areas

- (a) Any areas identified in the “Inventory of the Natural Areas and Wildlife Habitats of Orange County, North Carolina” shall be shown on the Final Plat.

- (b) A description of the resource, and the conditions of subdivision approval, which assure its protection shall be included in a document of describing development restriction to be recorded concurrently with the plat.
- (c) Common Open Space areas indicating the type (e.g., Primary/Secondary), the use (e.g., passive trails), the land area, the fee simple owner of the land, and/or the holder of the easement.

(F) Certificates and Endorsements

(1) General

The Final Plat shall be made by or prepared under the supervision of a Professional Land Surveyor licensed to practice in the State of North Carolina and shall contain a certificate as required by Section 47-30 of the General Statutes and prepared in substantially the following form and acknowledged by a notary public:

"I, _____, certify that this plat was drawn under my supervision from (an actual survey made under my supervision) (deed description recorded in Book ____, Page ____, etc.) (other); that the ratio of precision is 1: _____; that the boundaries not surveyed are shown as broken lines plotted from information found in Book ____, Page ____; that this map was prepared in accordance with G.S. 47-30 as amended. Witness my hand and seal this ____ day of _____, A.D., 20____."

Seal or Stamp

Surveyor Registration Number

(The surveyor shall also certify on the plat as required by G.S. 47-30 (f) (11) as amended.)

(2) Certificates of Dedication and Maintenance

- (a) The following certificate shall be printed on the Final Plat and shall be followed by the signature of the owner(s) of the property being subdivided acknowledged by a notary public.

"The undersigned owner hereby certifies that the land shown hereon is located within the subdivision-regulation jurisdiction of Orange County and hereby freely dedicates all rights-of- way, easements, streets, recreation areas, open spaces, common areas, utilities and other improvements to public or private common use as noted on this plat, and further assumes full responsibility for the maintenance and control of said improvements until they are accepted for maintenance and control by an appropriate public body or by an incorporated neighborhood or homeowners association or similar legal entity."

Owner(s): _____

Date: _____

- (b) Where a Final Plat shows a private road, an instrument substantially in the form of the County’s Standard Road Maintenance Agreement entitled, “DECLARATION OF RESTRICTIONS AND PROVISIONS FOR PRIVATE ROAD MAINTENANCE”, shall be recorded contemporaneously with the recordation of the approved Final Plat which guarantees: (a) right of access to any private road in the subdivision by all lots served by the road and by law enforcement and emergency vehicles, (b) right of access for the proposed private road to a State or municipally maintained road by way of direct access or other private roads, (c) perpetual maintenance for any private road serving the subdivision at the standards set for approval, and (d) provide record notice of the probability that future development dependent on the private roads for access will require upgrading of the roads to a higher private road standard or public dedication and upgrading of the road to North Carolina Department of Transportation standards.

This instrument shall also note acceptance by the owner of all liability related to the use of the road, and agreement to hold both the County and State harmless from such liability, and acknowledge that some public services may not be provided due to the private nature of the road. The guarantees of right of access and maintenance of the subdivision roads shall run with the land and shall be disclosed to any prospective purchaser of land in the subdivision as provided in North Carolina General Statutes Chapter 136- 102.6. Upon recordation the Deed Book and Page Number of the recorded document shall be referenced on the Final Plat.

Owner(s): _____

Date: _____

- (c) The following shall be printed on the final plat and shall be followed by the signature of the County Manager:

“Orange County hereby accepts, for the use of the general public, without maintenance responsibility, the offer of public dedication of all public rights-of-way, public easements, public streets, public recreation areas, public open space, public utilities and other public improvements shown on this plat.”

County Manager: _____

Date: _____

(3) Certificates of Approval

- (a) A Final Plat for a minor subdivision shall show the following form for Planning Department endorsement: “I hereby certify that the subdivision plat shown hereon has been found to comply with the Orange County Subdivision Regulations, provided that this plat shall be recorded within ninety (90) days of final approval, approved by the Orange County Planning Department on _____(Date).”

 Planning Director or Authorized Agent Date

- (b) A Final Plat for a major subdivision shall show the following form for Planning Department endorsement: "I hereby certify that the subdivision plat shown hereon has been found to comply with the Orange County Subdivision Regulations. Provided that this plat shall be recorded within ninety (90) days of final approval, approved by the Orange County Planning Department on _____ (Date)."

 Planning Director or Authorized Agent Date

- (c) (c) Where sewage disposal within all or a portion of a subdivision is to be accomplished through the installation and use of surface sewage disposal systems, the plat shall show the following form for Orange County Health Department endorsement:

"Soil and site evaluations have been conducted by the Orange County Health Department, Environmental Health Division, and unless otherwise noted, an area on each lot has been tentatively designated for the installation and repair of a wastewater system. This certification is not an Improvement Permit or an approval for a septic system on any of the lots. Subsequent changes to the lots may affect the ability to obtain Improvement Permits and/or Construction Authorizations.

 Environmental Health Specialist Date

- (d) Where water and/or sewage disposal is to be provided by a public or quasi-public entity the following statement shall be certified by the person authorized to represent the service provider:

"I hereby certify that the construction plans for the water system and/or sewer system have been approved for [Name of Project]. The utilities have been constructed, or secured via an irrevocable Letter of Credit, to the [Service Provider] standards.

 [Authorized Signature] Date

 [Attest Signature] Date

SEAL

- (e) Where a division of property is found to be exempt from the provision of this Ordinance as specified in Section 7.2, the plat shall show the following statements for Planning Department endorsement:

"I hereby certify that the division of property shown and described hereon is exempt from the subdivision regulations contained in the Orange County Unified Development Ordinance.

 Planning Director Date

- (b) If the required improvements are not completed prior to the submission of the Final Plat and their completion is not insured by regulations applicable to developments financed by the U.S. Department of Housing and Urban Development, the following certificate shall be recorded followed by the County Manager's signature:

"The County Manager hereby certifies that (a) cash in the amount of \$_____, or (b) an irrevocable letter of credit by an approved institution and as approved by the Orange County Attorney, has been posted with Orange County guaranteeing that all improvements will be installed as specified by the approved Preliminary Plat for _____ Subdivision. All required improvements must be completed within three hundred and sixty-five (365) days hereof."

County Manager: _____ Date: _____

Activity 430

ORANGE COUNTY, NORTH CAROLINA
COMMUNITY RATING SYSTEM (CRS) RECERTIFICATION – AUGUST 2022
ACTIVITY 430 – HIGHER REGULATORY STANDARDS:

1. The County continues to enforce more restrictive flood regulations within the SFHA including, but not limited to:
 - a. Restriction of new development or land disturbance within the SFHA for residential and non-residential developments (Section(s) 6.21.5 (B) (1) and (2) inclusive of UDO);
 - b. Enforcement of a 2-ft. freeboard requirement for residential structures (Section(s) 6.21.5 (B) (1) (c) of UDO);
 - c. Prohibition of new fill material within the SFHA (Section 6.21.5 (A) (13) of the UDO);
 - d. Prohibition of grading activities within the SFHA (Section 6.21.5 (A) (14) of the UDO);
 - e. Enforcement of a floodplain buffer, measured from the edge of the SFHA as required under Section 6.13 *Stream Buffers* of the UDO.
2. Orange County Inspections staff continues to enforce applicable State building codes within the County. See attached letter for more detail.



PLANNING *and* INSPECTIONS

Michael Rettie, Chief Building Official | mrettie@orangecountync.gov | 131 W. Margaret Lane, Hillsborough, NC 27278 | 919.245.2600

7/29/2022

To whom it may concern.

Orange County Inspections Division is charged with the responsibility to enforce the North Carolina State Building Codes within unincorporated Orange County and the Town of Hillsborough.

State Building Code requirements addressing positive drainage that are enforced for minimum compliance standards include section R401.3 for surface water drainage upon Residential properties and R322 for flood resistant construction. Commercial projects are inspected per Appendix G and a multitude of Code provisions for the various elements and features that are verified during construction.

Sincerely

Michael Rettie

A handwritten signature in blue ink that reads "Michael Rettie".

Activity 440

ORANGE COUNTY, NORTH CAROLINA
COMMUNITY RATING SYSTEM (CRS) RECERTIFICATION – AUGUST 2022
ACTIVITY 440 – FLOOD DATA MAINTENANCE:

Staff has attached a 'print screen' of our GIS data base denoting the available information for mapping purposes. As you will note, and as detailed within this response under other activities, the following data is available for staff to offer mapping assistance to interested parties:

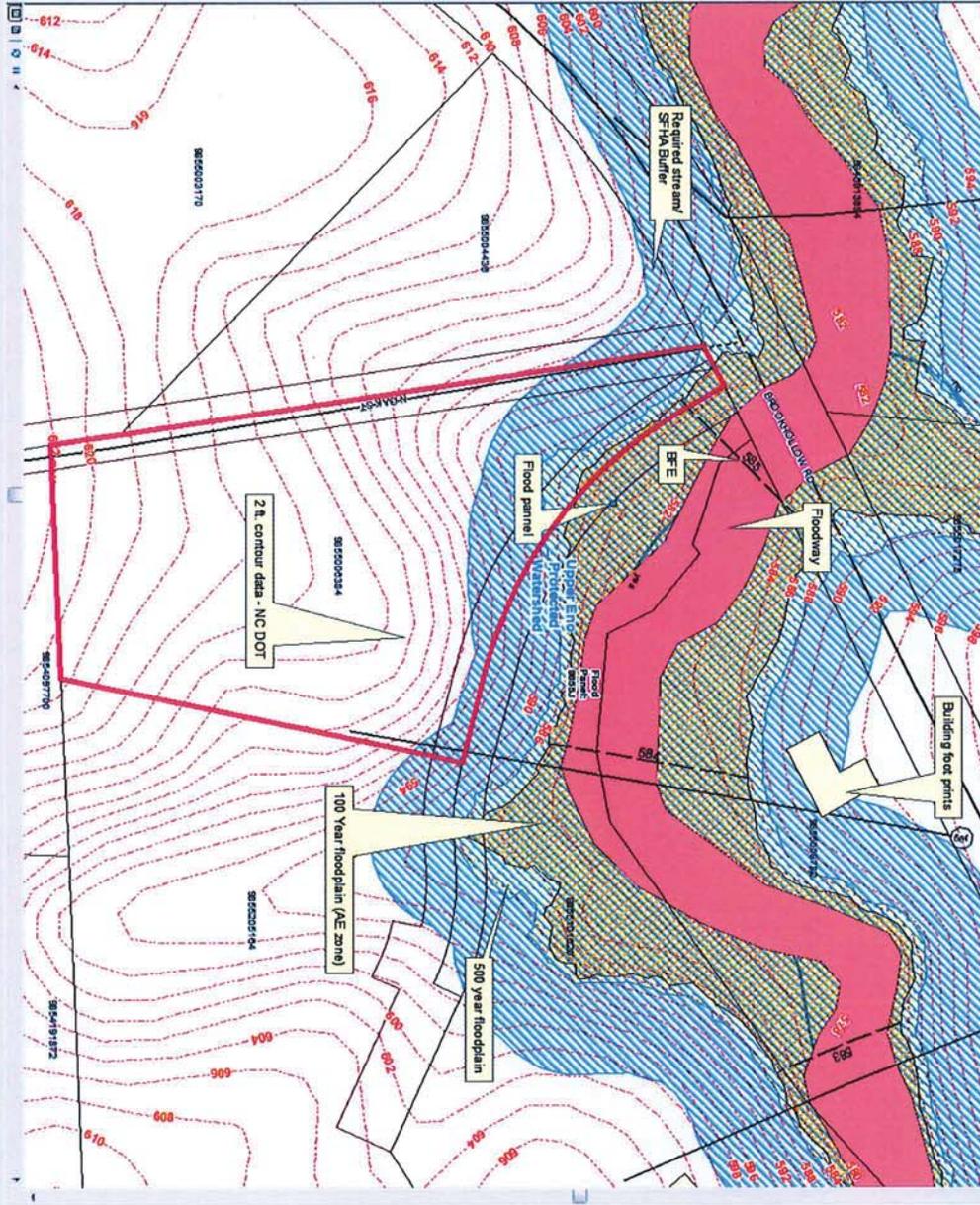
- a. Individual Parcels
- b. Streets with street names
- c. Easements (i.e. road, utility, right-of-way, access, etc.)
- d. Zoning data
- e. Watershed data, including Watershed Overlay zoning data
- f. SFHA Boundaries including:
 - i. The Floodway
 - ii. 1% Annual Chance of Flood (i.e. 100 Year Floodplain)
 - iii. 0.2% Annual Chance of Flood (i.e. 500 Year Floodplain)
 - iv. Base Flood Elevation
 - v. FIRM Panel Number
 - vi. Footprints of existing structures in SFHA
 - vii. FIRM Cross Section data
 - viii. 100 Year Floodplain historical data
 - ix. 500 Year Floodplain historical data
- g. Required stream and floodplain buffers (buffer width depends on slope of the property near the stream/adjacent floodplain boundary)
- h. Contour data (2 ft. contour data from NC Department of Transportation)
- i. Soils data
- j. Mapped wetland data

- k. Municipal corporate limits and extraterritorial jurisdictional boundary (ETJ) area (i.e. the defined areas of the County planning jurisdiction)
 - l. Conservation easements and open space areas
 - m. Aerial imagery (the County has digital aerial photographic data from 2021, 2017, 2013, 2012, 2010, 2008, 2006, 2003, and 1998).
2. With respect to maintaining/updating floodplain information the County currently employees the following:
- a. The County has a GIS database containing our most current FIRM data. This system is updated electronically and can display and/or print current maps detailing floodplain information on all parcels of property, computer-aided design (CAD), or other digitized system that updates
 - b. The County's land use management/building permit system (EnerGov) is utilized to identify parcels encumbered by SFHA.

Parcels encumbered by floodplain are 'flagged' within the permit system with a notice indicating development of the property is subject to compliance with flood regulations as contained within the Unified Development Ordinance. Through our permit system all parcels are linked to our GIS database so a map is readily accessible denoting the location of all SFHA in an effort to provide additional assistance to a property owner attempting to obtain a development permit.

It should also be noted County staff has created what is referred to as a 'Zoning Report' (refer to **Activity 320**) denoting development opportunities and constraints on a specific parcel subject to a development application. This in turn allows staff to work with an applicant to modify a development proposal to comply with applicable flood development regulations.
 - c. The County maintains both paper and digital copies of all current, and past, FIRM maps.

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 - Parcels
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 - LINE CODE
 - Road Easement
 - Utility Easement
 - Parcel Lines
 - Official Floodplain Layers SRQPUP
 - Building 2008
 - LOMR
 - Base Flood Elevation (Symbol)
 -
 - Cross Section
 -
 - FIM4
 - FIM4
 - 100 Year Floodplain (Effective 02/02/07)
 - Cape Fear/Neuse River Basin
 - 100 YR Floodplain (Effective 02/02/07)
 - Floodway (Effective 02/02/07)
 - 500 Year Floodplains (Effective 02/02/07)
 - Cape Fear/Neuse River Basin
 - 500 YR Floodplains (Effective 02/02/07)
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 - 500 Year Floodplains (Archived)
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 - Floodplain Buffer 65ft
 - Floodplain Buffer 80ft
 - Stream Buffer 65ft
 - Water Body Buffer 65ft
 - Stream Buffer 80ft
 - Stream Buffer 100ft
 - Stream Buffer 100ft
 - Reservoir Buffer 150ft
 - Conservation Easements Layers GRQUP



Orange Search Window

Orange County Searches

Search For (Parcel Polygon)

PK: _____

Owner: _____

Subdivision: _____

Code: _____

Neighborhood: _____

Address/Street Searches

House# _____

Sheet Name: _____

Search Type

Street Centerline

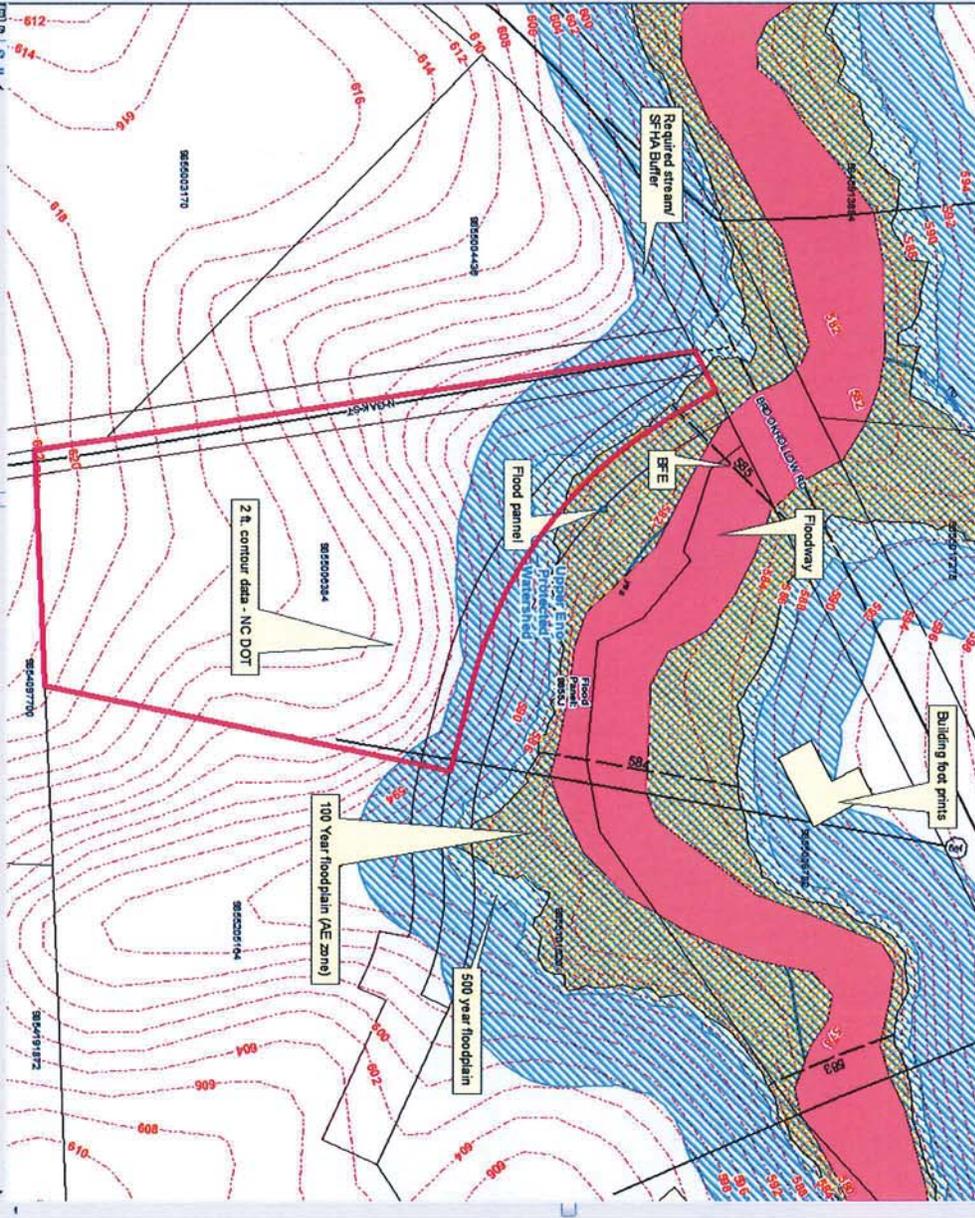
Address Point

Place: _____

Field Work?

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- Base Flood Elevation (Symbol)
- Cross Section
- FIM
- 100 Year Floodplains (Effective 02/02/07)
 - Cape Fear/Neuse River Basin
 - 100 YR Floodplain (Effective 02/02/07)
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- Conservation Estasmets (Others)
- Conservation Estasmets (OC)
- City Limits and ETJ
- City Jur
- City Limits
- ETJ
- Soils
- Other 2013
- Orange-Alamance Water System



Orange Search Window

Orange County Searches

Search For Parcel (Polygon)

PK: _____

Owner: _____

Subdivision: _____

Condo: _____

Neighborhood: _____

Address/Street Services

House#: _____

Street Name: _____

Search Type

Street Centeline

Address Point

Place: _____

Field View? Load Dropdown List

1950248.S01 830394.136 Feet



Data includes:

- Parcels
- Streets
- Easements
- Floodplain layer (SF&A)
- Buildings (Footprints)
- Application LOMR
- Base Flood data
- Cross Section Info.
- FIRM Map number
- Floodway
- 100 Year
- 500 Year
- 100 Year Archived data
- 500 Year Archived data
- Zoning
- Watershed (Zoning)
- Wetlands
- 2 ft. Contour data

Zoning

Watershed

NMI Wetlands

Streets

County Boundary

2' Contours (NCDOT)

Etland Village Overlay

Etland Interstate Overlay

Water Body

Streams

Floodplain Buffer 55ft

Floodplain Buffer 80ft

Stream Buffer 65ft

Water Body Buffer 65ft

Stream Buffer 80ft

Stream Buffer 100ft

Stream Buffer 100ft

Reservoir Buffer 150ft

Conservation Easements Layers GROUP

2 ft leads

2 ft. contour

Required
50 feet

- Watershed
- NWI Wetlands
- Streets
- County Boundary
- 2' Contours (NCDOT)
- Eiland Village Overlay
- Eiland Interstate Overlay
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- Stream Buffer 80ft
- Stream Buffer 100ft
- Stream Buffer 100ft
- Reservoir Buffer 150ft
- Conservation Easements Layers GROUP
- Conservation Easements (Others)
- Conservation Easements (OC)
- City Limits and ETJ
- City Jur
- City Limits
- ETJ
- Soils
- Ortho 2013

Conservation Easements

Jurisdiction boundaries lines
City Limits (ETJ)

Soils data
Ortho data

Site Assessment for PIN: 9892-06-1659

Site Data

Zoning: Rural Residential (R1)
 Acreage: 2.07 acres
 Overlay Districts: Lower Eno Protected Watershed Overlay
 D'

Deed: Book 5580/ Page 66
 Plat/Legal Description: 10 Sec 2 Windy Hill Farm; Plat (Book 45/
 Page 66); Restrictive Covenants (Book 594/ page 390)

Zoning Requirements:

Density: Max. dwelling units/acre or sq. ft.: 1 dwelling unit per
 40,000 sq. ft.
 Min. Lot Size: 40,000 sq. ft.
 Min. lot width: 130'
 Maximum height: 25'

Building Setbacks:

-Front (and Corner lots) = 40' from public or private rights-of-way
 -Side Setbacks = 20' from side lot lines
 -Rear Yard Setback = 20' from rear lot lines

Environmental Features:

Streams and water body located off lot. Stream buffer = 65 ft.
 (Method A); Water body buffer = 65 ft. (Method A).
 Slope: Stream = 6.4%; Water body = 4%
 100 year floodplain.

Base Flood Elevation (BFE) based on FIRM Map: 479
 County Freeboard: 2
 Minimum Finished Floor Elevation (FFE): 481
 Flood Panel: 9892J

Impervious Surface Limits: 36% based on UDO Sec. 4.2.5 =
 32,460.91 sq. ft. of allowable impervious surface area.

Land Disturbance Thresholds (Erosion Control)

- 1) Erosion Control Application/Permit required if disturbing more than 20,000 sq. ft.
 - 2) Stormwater Management Application/Permit required if disturbing more than 21,780 sq. ft. for residential structures.
- ***Call OC Erosion Control at (919) 245-2586 for more Information.

Notes:

(1) Private Road Justifications, Recorded Declarations, Restrictive Covenants, Bona Fide Farm status, use and building type (e.g. duplex units) will change subdivision and development requirements.

Date Site Assessment Completed: 6/15/2016 by MOB



PIN#: 9892061659
 WILLIAM J KODROS
 DEBORAH A KODROS
 3916 WINDY HILL RD
 C... Hill, NC 27514

Data shown on this map is obtained from Orange County GIS and is for reference only. Exact locations and boundaries should be verified. Map prepared by Orange County Planning & Inspections. 06/15/2016 - mboyle

- CGS Stream
- Soils Survey Stream
- ▨ Floodplain Buffer 65ft
- ▨ Water Body Buffer 65ft
- ▨ Stream Buffer 65ft
- - - 2' Contours (NCDOT)
- ▭ Parcels
- ▨ Zoning
- ▨ Water Body
- ▨ Watershed
- ▨ Soils
- ▨ 100 YR Floodplain (Effective 02/02/07)
- Base Flood Elevation (Symbol)
- ▨ FIRM



1 Inch = 100 feet
 0 25 50 Feet

Activity 450

ORANGE COUNTY, NORTH CAROLINA
COMMUNITY RATING SYSTEM (CRS) RECERTIFICATION – AUGUST 2022
ACTIVITY 450 – EROSION CONTROL AND STORMWATER MANAGEMENT:

Orange County has a comprehensive stormwater management and erosion & sedimentation control program and is a recognized local delegated authority by the State of North Carolina to administer same.

Beginning in November 2020, the program began being administered by Mr. Patrick Mallett, a former member of the Current Planning division.

Regulatory provisions can be found in Section(s) 6.14 and 6.15 of the UDO, respectively. Excerpts of those UDO sections are attached.

Staff has created an “FAQ” handout (attached) which includes a Q&A, a map of the Orange County Watersheds, and a land disturbance area threshold table for residential and non-residential projects for each watershed area (i.e. this is the table that defines whether an erosion control plan and/or stormwater management plan is needed). This handout is available on the Erosion Control website maintained by Orange County at <https://www.orangecountync.gov/1303/Erosion-Control>. Please note the land disturbance threshold information is also included on all Site Assessments created by the Department further detailed in **Activity 320**.

Examples of a typical erosion & sedimentation control plan and a stormwater management plan are also attached for reference.

- (B) Existing forested areas or any other healthy vegetation may not be removed from a stream buffer, except where replaced with vegetation resulting in comparable stormwater runoff velocity and quantity one year after planting.
- (C) New vegetation shall be planted to capture non-source pollutants before they reach the perennial stream, as per applicable Orange County Standards.

SECTION 6.14: STORMWATER MANAGEMENT

6.14.1 Introduction

As a watershed becomes more developed, the amount of impervious surface increases, causing a decrease in the rate at which stormwater runoff which can be absorbed into the soil. This results in more stormwater flowing directly into streams and other water bodies. Because this direct runoff has not been filtered through the soil, pollutants from the air and land surface enter streams and increase the potential for pollution of drinking water supplies.

6.14.2 Purpose

The purpose of the Board of County Commissioners in adopting stormwater regulations is to protect the water quality of the streams that lie within Orange County by reducing and controlling stormwater runoff and addressing nutrient reductions for both new and existing development.

6.14.3 Jurisdiction-Wide and Inter-Local Approaches

- (A) Orange County shall have the option of implementing jurisdiction-wide and/or inter-local approaches to control stormwater runoff and achieve nutrient reductions.
- (B) Any jurisdiction-wide and/or inter-local approaches must be approved by the Orange County Board of Commissioners, and the Environmental Management Commission before implementation.

6.14.4 General Methods

The following general approaches shall be utilized to minimize the effects of stormwater pollution on drinking water supplies in Orange County:

- (A) **Non-Structural Stormwater Control**
 - (1) The stormwater run-off generated by one inch of rain from all project area surfaces shall be controlled to the extent possible through on-site infiltration and through the use of methods which rely on natural soil properties for absorption and treatment.
 - (2) Run-off from roads, parking lots, and/or sidewalks shall be directed to undisturbed areas through use of berms, grassed diversion ditches or swales, or other acceptable means to reduce run-off velocity and filter out pollutants.
 - (3) **Impervious Surface Limits**
 - (a) In order to promote infiltration of stormwater runoff into the soil and minimize direct and immediate runoff into streams and water supply impoundments, the maximum percentage of the total lot area which may be covered with an impervious surface shall be specified. This limit is referred to as the "impervious surface ratio".
 - (b) Impervious surface calculations for an individual development shall be cumulative for original construction and any subsequent additions. One-half of the width of any of any existing or proposed road adjacent to an individual lot shall be included as impervious surface for that lot, except in the case where an existing road was contained within a dedicated public right-of-way at the time that the watershed regulations were first applied to the watershed within which the development is located.

(4) Infiltration Techniques

- (a) The benefits of infiltration techniques include:
 - (i) Removal of both suspended and dissolved pollutants,
 - (ii) They require less maintenance,
 - (iii) They reduce flooding,
 - (iv) They promote groundwater recharge, and
 - (v) They help maintain stream flow during dry periods.
- (b) Where on-site infiltration methods are utilized, areas for such purposes shall be designated on the plat and shall remain undisturbed both during and after construction.
- (c) Undisturbed areas for infiltration of run-off shall also be located downslope from impervious surfaces and shall not include areas characterized by floodplains, highly erodible or impervious soils, steep slopes or previously disturbed areas.
- (d) Areas designated as suitable for septic tank nitrification fields may not be used for stormwater infiltration purposes.

(B) Structural Stormwater Measures

- (1) In cases where non-structural methods may not adequately control the runoff from the first inch of rain due to the amount of impervious surface proposed to be developed, and other factors such as soil type, slope, presence of floodplains and erodible soils, and/or lack of vegetative cover, structural stormwater measures, which capture stormwater for slow release through an outlet, are required.
- (2) Where required, structural stormwater measures shall be constructed in accordance with this Section.

(C) Impervious Surface and Detention Pond Requirements

- (1) For all protected watersheds, an absolute limit on the percentage of lot area which can be covered with impervious surfaces has been established. See Section(s) 4.2.5 and 4.2.6 of this Ordinance.
- (2) In some cases, structural stormwater measures are required when the proposed impervious surface ratio exceeds a specified percentage, which is below the absolute limit.

6.14.5 Applicability

- (A) The stormwater standards and regulations included herein are applicable to all new development within the Orange County planning jurisdiction, including private, public, state, and federal development not covered by a separate NPDES permit, as follows:

(1) Falls Lake Watershed

- (a) Any activity that cumulatively disturbs greater than one-half acre of land in order to establish, expand or modify a single family or duplex residential development or a recreational facility.
- (b) Any activity that cumulatively disturbs greater than 12,000 square feet of land in order to establish, expand, or modify a multifamily residential development or a commercial, industrial or institutional facility.
- (c) New development that disturbs less than the above thresholds are exempt unless the new development is part of a larger common plan of development or sale and the larger common plan exceeds the above

thresholds, even though multiple, separate or distinct activities take place at different times on different schedules.

(2) Jordan Lake Watershed

- (a) Any activity that cumulatively disturbs greater than one acre of land in order to establish, expand or modify a single family or duplex residential development or a recreational facility.
- (b) Any activity that cumulatively disturbs greater than one-half an acre of land in order to establish, expand, or modify a multifamily residential development or a commercial, industrial or institutional facility.
- (c) New development that disturbs less than the above thresholds are exempt unless the new development is part of a larger common plan of development or sale and the larger common plan exceeds the above thresholds, even though multiple, separate or distinct activities take place at different times on different schedules.

- (B)** New development shall not include agriculture, mining, or forestry activities, as defined by North Carolina General Statutes.

6.14.6 Review Criteria

- (A)** New development within the Orange County planning jurisdiction must comply with the following:
- (1)** Riparian areas must be protected and maintained in compliance with this Ordinance,
 - (2)** Nutrient load contribution must meet the standards listed in Section 6.14.7 as required by the North Carolina Division of Water Quality (NC DWQ),
 - (3)** No net increase in peak flow leaving the site from the predevelopment conditions for the 1-year, 24-hour storm,
 - (4)** Stormwater systems shall be designed to control and treat, at a minimum, the stormwater runoff generated by one inch of rainfall from all project area surfaces. The treatment volume shall be drawn down pursuant to standards specific to each practice as determined by the current version of the NC DWQ stormwater design manual.
 - (5)** New development that would exceed the nutrient loading rates set out in subsection (A)(2) above, shall include engineered stormwater controls designed to have a minimum of 85% average annual removal for Total Suspended Solids (TSS).
- (B)** Proposed new development may satisfy the review criteria standards of this section by meeting the post-development hydrologic criteria set out in Chapter 2 of the most recent version of the North Carolina Low Impact Development Guidebook.

6.14.7 Nutrient Load

- (A)** Nitrogen and phosphorus loads contributed by proposed new development shall not exceed the following unit-area mass loading rates:
- (1) Falls Lake Watershed**
 - (a) Nitrogen, 2.2 pounds per acre per year
 - (b) Phosphorus, 0.33 pounds per acre per year
 - (2) Jordan Lake Watershed**
 - (a) Upper New Hope Creek Arm
 - (i) Nitrogen, 2.2 pounds per acre per year

- (ii) Phosphorus, 0.82 pounds per acre per year
 - (b) Haw River Arm
 - (i) Nitrogen, 3.8 pounds per acre per year
 - (ii) Phosphorus, 1.43 pounds per acre per year
- (B)** The nutrient export from each new development shall be calculated in pounds per acre per year (using the approved accounting tool) in accordance with the methodologies approved by the NC DWQ.
- (C)** If a proposed development subject to nutrient load requirements contributes nutrients greater than the standards listed above, the developer may install structural stormwater BMPs to meet the required nutrient load standards or do a combination of BMPs and offset payments to achieve the standard.
- (D) Offset Payments**
 - (1)** Offset fees may be permitted to meet the nutrient export levels set for new development. In order to utilize offset fees, the proposed new development subject to the nutrient load standards must attain nitrogen and phosphorus loading rate reductions on-site that meet the following criteria prior to using an offsite offset measure:
 - (a) Falls Lake Watershed
 - (i) 30% or more reduction in both nitrogen and phosphorus loading from the untreated conditions for any single-family, detached and duplex residential development disturbing one half acre but less than one acre;
 - (ii) 50% or more reduction in both nitrogen and phosphorus loading from the untreated conditions for any single-family, detached and duplex residential development disturbing more than one acre;
 - (iii) 30% or more reduction in both nitrogen and phosphorus loading from the untreated condition for other development, including multi-family residential, commercial and industrial development disturbing 12,000 square feet but less than one acre;
 - (iv) 50% or more reduction in both nitrogen and phosphorus loading from the untreated condition for other development, including multi-family residential, commercial and industrial development disturbing more than one acre;
 - (v) 30% or more reduction in both nitrogen and phosphorus loading from the untreated condition for proposed redevelopment activities in a designated downtown area that would replace or expand structures or improvements that existed as of December 2006.
 - (b) Jordan Lake Watershed
 - (i) Six pounds per acre per year nitrogen for single-family, detached and duplex residential development.
 - (ii) Ten pounds per acre per year nitrogen for other development including commercial, industrial, and multi-family residential.
 - (2)** Offset fees may be paid to the North Carolina Ecosystem Enhancement Program (NCEEP), approved private mitigation bank, or other mitigation option as approved by the NC DWQ and Orange County. It is the policy of NC DWQ and Orange County, as well as a requirement in certain watersheds, that offset payment funds be utilized where they are generated to the maximum extent

possible.

- (3) Offset payment fees and calculation methods are determined by the NCDWQ as approved by the North Carolina Environmental Management Commission (EMC). The total amount of offset payment will be determined based on current NC DWQ policy and regulation on a case by case basis.

(E) Permanent Nutrient Export Reduction Best Management Practices

- (1) Allowable on-site structural stormwater BMPs for nutrient reduction shall include those listed in the current NC DWQ Stormwater Best Management Practices Manual (Stormwater BMP Manual) or others approved on a case by case basis.
- (2) Design, maintenance and operation of stormwater BMPs shall follow standards provided in the Stormwater BMP Manual.
- (3) Deviations from these standards may be allowed as approved on a case by case basis.

(F) Total Nutrient Removal Rates

Total nutrient removal rates of stormwater BMPs and BMPs in a series will be calculated pursuant to the approved accounting tool.

6.14.8 Peak Runoff Volume

(A) Standard

For all new development, there shall be no net increase in peak flow leaving the site from the predevelopment conditions for the 1 year, 24 hour storm.

(B) Calculating Peak Runoff Volume

- (1) The following are acceptable methodologies for computing the pre- and post-development conditions for the 1 year, 24 hour storm:
 - (a) Rational Method,
 - (b) Peak Discharge Method as described in the USDA Soil Conservation Service's Technical Release Number 55 (TR-55),
 - (c) Alternative methods must be approved by the County.
- (2) The same method must be used for both the pre- and post- development conditions.

6.14.9 Stormwater Management Plan

(A) Required Approval

The Erosion Control Officer shall not issue any permits for new development on any land within Orange County subject to the provisions of this Section, unless and until a Stormwater Management Plan has been reviewed and approved in accordance with Section 2.21.1 of this Ordinance.

(B) Compliance with Requirements

Any person engaged in new development activities as defined by this Section who fails to file a plan in accordance with this Ordinance, or who conducts any new development except in accordance with provisions of an approved Stormwater Management plan shall be deemed in violation of this Ordinance.

(C) Enforceable Restriction

Approval of the Stormwater Management plan shall require an enforceable restriction on property usage that runs with the land, such as a recorded deed restriction or protective covenants, to ensure that future development and redevelopment maintains the site consistent with the approved Stormwater Management plan.

6.14.10 Operation and Maintenance of Structural Stormwater Measures

(A) Posting of Financial Security

All stormwater control structures shall be conditioned on the posting of adequate financial assurance for the purpose of maintenance, repairs or reconstruction necessary for adequate performance. Financial assurance shall be in the form of one of the following:

(1) Security for Construction of Required Improvements

- (a) The permit applicant shall provide one of the following as surety for the completion of required improvements:
 - (i) A performance bond from a surety bonding company authorized to do business in North Carolina,
 - (ii) An irrevocable letter of credit or other instrument readily convertible into cash at face value payable to Orange County or
 - (iii) Cash placed in escrow with a financial institution designated as an official depository of Orange County.
- (b) The bond or other instrument shall be in an amount equal to 1.25 times the total cost of the stormwater control structure, as estimated by the applicant and approved by the County Engineer.
 - (i) Total Cost
 - a. The total cost of the stormwater control structure shall include the following:
 - i. The value of all materials such as piping and other structures;
 - ii. Seeding and soil stabilization;
 - iii. Design and engineering; and,
 - iv. Grading, excavation, fill, etc.
 - b. The costs of the stormwater control structure shall not be prorated as part of a larger project, but shall be costed as a separate project.
- (c) Failure to Perform
 - (i) Upon default of the permit applicant to complete and/or maintain the stormwater control structure as spelled out in the performance bond or other security, the County may obtain and use all or any portion of the funds necessary to complete the improvements based on an engineering estimate.
 - (ii) The Board shall return any funds not spent in completing the improvements to the owning entity.

(2) Security for Maintenance of Required Improvements

- (a) The permit applicant shall deposit with Orange County either cash or other instrument approved by the County Attorney that is readily convertible into cash at face value.
- (b) The cash or security shall be in an amount equal to 15% of the total cost of the stormwater control structure or the estimated cost of maintaining the stormwater control structure over a ten year period, whichever is greater.
 - (i) Estimated Maintenance Costs

- a. The estimated cost of maintaining the stormwater structure shall be consistent with the approved operation and maintenance plan or manual provided by the developer under Section 6.14.10(B)(2).
 - b. The amount shall be computed by estimating the maintenance cost for 25 years and multiplying this amount by two-fifths or 0.4.
- (c) Failure to Perform
- (i) Upon default of the owning entity to maintain, repair and, if necessary, reconstruct the stormwater control structure in accordance with the Operation and Maintenance Agreement, the County shall obtain and use all or any portion of the cash security to make necessary improvements based on an engineering estimate.
 - (ii) Such expenditures of funds shall only be made after exhausting all other reasonable remedies seeking the owning entity to comply with the terms and conditions of the Operations and Maintenance Agreement.
 - (iii) The County shall not return any of the deposited cash funds.
- (B) Maintenance and Upkeep**
- (1) Operation and Maintenance Agreement**
- (a) The permit applicant shall enter into a binding Operation and Maintenance Agreement between Orange County and all interests in the development.
 - (b) The agreement must include the following:
 - (i) Name and address of the person or organization financially responsible for paying the annual inspection fee;
 - (ii) Name(s) and address(es) of all parties to whom a copy of the annual inspection report should go;
 - (iii) Name and address of the person or organization financially responsible for all maintenance specified in the annual inspection report; and
 - (iv) Emergency contact information.
 - (c) The Agreement shall require the owning entity to maintain, repair and, if necessary, reconstruct the stormwater control structure in accordance with the operation and management plan or manual prepared by the developer.
 - (d) The Operations and Maintenance Agreement shall be signed and notarized and filed with the Orange County Register of Deeds.
 - (e) In residential subdivisions where a Homeowner's Association will be assuming responsibility for all permanent structural stormwater measures, a signed and notarized Homeowner's Association Notification will be required, and a revised maintenance agreement must be submitted. This must be given to the Orange County Planning Department before the Land Disturbing Permit may be closed, and any construction bond held on the permanent structural stormwater measures may be released.
 - (f) The owner of each stormwater BMP, whether engineered stormwater control or non-engineered stormwater control, shall maintain it so as not to create or result in a nuisance condition.

- (g) Every engineered stormwater control installed pursuant to this Ordinance shall be made accessible for adequate maintenance and repair by a maintenance easement. The easement shall be recorded and its terms shall specify who make use of the easement and for what purposes.
- (h) The owner of each engineered stormwater control shall keep records of inspections, maintenances, and repairs and shall submit the same upon reasonable request to the Erosion Control Officer.

(2) Operation and Maintenance Plan

- (a) An operation and maintenance plan or manual shall be provided by the developer for each stormwater control structure, indicating the following:
 - (i) What operation and maintenance actions are needed,
 - (ii) What specific quantitative criteria will be used for determining when those actions are to be taken, and
 - (iii) Who is responsible for those actions, consistent with the Operations and Maintenance Agreement.
- (b) The standard maintenance plan shall specifically address, but is not limited to:
 - (i) Any mowing of permanent vegetation,
 - (ii) Any removal of bushes and trees from the dam of a wet detention pond,
 - (iii) Reseeding of any eroding areas of the wet detention ponds, open channel practices, riparian buffers, and vegetated filter strips,
 - (iv) Replacing of impaired vegetation in a constructed wetlands or riparian buffer,
 - (v) Removal of debris from the 'trash rack' on any wet detention pond or sand filter, and
 - (vi) Repair of any damage to structural aspects of wet detention ponds, constructed wetlands, level spreaders, and sand filters.
- (c) The Plan shall clearly indicate the steps that will be taken for restoring a stormwater control structure to its design specifications if a failure occurs.

(3) Landscaping and Grounds Maintenance

- (a) Landscaping and grounds maintenance shall be the responsibility of the owning entity.
- (b) Vegetation shall not be established or allowed to mature to the extent that the integrity of the control structure is diminished or threatened, or to the extent of interfering with any easement or access to the stormwater structure.

(4) Repair or Reconstruction

- (a) Except for general landscaping and grounds maintenance, the owning entity shall notify the County prior to any repair or reconstruction of the stormwater structure.
- (b) After notification by the owning entity, the Erosion Control Officer shall inform the owning entity of any required additions, changes or modifications and of the time period to complete said improvements.

- (c) All improvements shall be made consistent with the approved plans and specifications of the stormwater control structure and the operations and maintenance plan or manual.

(C) Inspections and Release of Sureties

(1) County Inspection and Review

- (a) The stormwater control structure shall be inspected by the Erosion Control Officer, after the owning entity notifies him/her that all work has been completed. At this inspection, the owning entity shall provide:
 - (i) The signed deed, related easements and survey plat for the stormwater control structure ready for filing with the Orange County Register of Deeds; and
 - (ii) A certification sealed by an engineer or landscape architect (to the extent that the General Statute, Chapter 89A, allow) stating that the detention pond is complete and consistent with the plans and specifications.
- (b) If the project passes inspection and the Erosion Control Officer accepts the certification, deed and easements, he/she shall file the deed and easements with the Orange County Register of Deeds, release up to 75% of the value of the performance bond or other security and issue a Watershed Protection Compliance Permit for the stormwater control structure.
- (c) If deficiencies are found, the Erosion Control Officer shall direct that the necessary improvements be made and/or documents corrected and resubmitted for approval. Upon completion, the improvements shall be re-inspected.

(2) Watershed Protection Compliance Permit Required Prior to Occupancy

No Building Permit or Certificate of Occupancy may be issued in the absence of a valid Watershed Protection Compliance Permit.

(3) Release of Remaining Security

- (a) No sooner than one year after the filing date of the deed, easements and maintenance agreement, the developer may petition the Board of County Commissioners to release the remaining value of the performance bond or other security.
- (b) Upon receipt of said petition, the Erosion Control Officer shall inspect the stormwater control structure to determine whether the controls are performing as designed and intended.
- (c) The Erosion Control Officer shall present the petition, inspection report and recommendations to the Board of County Commissioners.
- (d) Board of County Commissioners Review
 - (i) If the Board of County Commissioners approves the report and accepts the petition, the developer shall deposit with Orange County a cash amount equal to that described in Section 6.14.10(C)(5), after which, the Board of County Commissioners shall release the performance bond or other security.
 - (ii) If the Board of County Commissioners does not accept the report and rejects the petition, it shall provide the developer with instructions to correct any deficiencies and all steps necessary for the release of the performance bond or other security.

(4) Annual Inspection Required

- (a) All stormwater structures shall be inspected by the owning entity at least on an annual basis to determine whether the controls are performing as designed and intended.
- (b) Records of inspections shall be submitted annually to the Erosion Control Officer on forms approved by Orange County.
- (c) Annual inspections shall begin within one year of the filing date of the deed for the stormwater control structure.
- (d) The Erosion Control Officer will inspect each stormwater BMP approved pursuant to these rules approximately every five years. In the event the Erosion Control Officer discovers the need for corrective action of improvements, he/she shall notify the owning entity of the needed improvements and the date by which the corrective action is to be completed. All improvements shall be made consistent with the plans and specification of the stormwater control structure and the operation and maintenance plan or manual. After notification by the owning entity, the Erosion Control Officer shall inspect and approve the completed improvements.

(5) Annual Maintenance Inspection Fee

- (a) The Fee for the first year shall be paid before:
 - (i) The release of any Final Certificate of Occupancy for Non-Residential Properties.
 - (ii) The release of the construction bond for Residential or Non-Residential Properties.
- (b) The fee shall be based upon the current Orange County Planning Fee Schedule, and shall be paid to Orange County following each annual inspection.
- (c) Failure to pay the Annual Maintenance Inspection Fee shall be deemed a violation of this Ordinance.

6.14.11 Amendments to Approved Plans and Specifications

(A) Minor Amendments to Plans and Specifications

- (1) Amendments to the plans and specifications of the stormwater control structure and/or the operation and maintenance plan or manual may be approved by the Erosion Control Officer, provided that the changes do not involve a change in the size or location of the structure.
- (2) Proposed changes shall be prepared by a North Carolina registered professional engineer or landscape architect (to the extent that the General Statutes, Chapter 89A, allow) and submitted for review by the Erosion Control Officer.
- (3) Erosion Control Officer Review
 - (a) If the Erosion Control Officer approves the proposed changes, the owning entity of the stormwater control structure shall file sealed copies of the revisions with the Erosion Control Officer.
 - (b) If the Erosion Control Officer disapproves the changes, the proposal may be revised and resubmitted as a new proposal. If the proposal has not been revised and is essentially the same as that already reviewed, it shall be returned to the applicant.
 - (c) The Erosion Control Officer shall report any such revisions to the Board of County Commissioners at the next available regular meeting.

(B) Major Amendments to Plans and Specifications

- (1) Amendments to the plans and specifications of the stormwater control structure and/or the operation and maintenance plan or manual which involve a change in the size or location of the structure may be approved by the Board of County Commissioners after receiving a recommendation from the Erosion Control Officer.
- (2) Proposed changes shall be prepared by a North Carolina registered professional engineer or landscape architect (to the extent that the General Statutes, Chapter 89A, allow) and submitted to and reviewed by the Erosion Control Officer.

(C) Revision of Plans Found to be Inadequate

If the County finds that the operations and maintenance plan or manual is inadequate for any reason, the owning entity shall be notified of any required changes and shall prepare and file copies of the revised agreement with the Orange County Register of Deeds, the Erosion Control Officer, and the owning entity.

6.14.12 Stormwater Discharges

(A) Applicability

The regulations contained herein shall be applicable to all new development and existing projects within the County planning jurisdiction.

(B) In General

- (1) Orange County herein establishes methods for controlling the introduction of pollutants into the stormwater collection system or receiving waters.
- (2) No person shall discharge or cause to be discharged into the stormwater collection system or receiving waters any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than stormwater.
- (3) Orange County Planning and Inspections shall collect information related to stormwater discharges from all applicable sources within its jurisdiction.

(C) Allowable Discharges

The commencement, conduct, or continuance of any illegal discharge to the stormwater collection system or receiving waters is prohibited. However, the following discharges are exempt from discharge prohibitions established by this Ordinance provided that they do not significantly impact water quality:

- (1) Waterline flushing,
- (2) Landscape irrigation,
- (3) Diverted stream flows,
- (4) Uncontaminated rising groundwater,
- (5) Uncontaminated groundwater infiltration to the stormwater collection system,
- (6) Uncontaminated pumped groundwater,
- (7) Discharges from potable water sources,
- (8) Foundation drains,
- (9) Uncontaminated air conditioning condensation,
- (10) Irrigation water,
- (11) Springs,
- (12) Water from crawl space pumps,
- (13) Footing drains,

- (14) Lawn watering,
- (15) Non-commercial car washing,
- (16) Flows from riparian habitats and wetlands,
- (17) NPDES permitted discharges,
- (18) Street wash water,
- (19) Fire fighting emergency activities,
- (20) Wash water from the cleaning of buildings,
- (21) Dechlorinated backwash and draining associated with swimming pools,
- (22) Flows from firefighting,
- (23) Discharges specified in writing by the County as being necessary to public health and safety,
- (24) Dye testing is an allowable discharge, but requires verbal notification to the Erosion Control Officer prior to the time of the test, and
- (25) Any non-stormwater discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or waste discharge order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the stormwater collection system.

(D) Prohibited Discharges

- (1) It is a violation of this Ordinance for any person to discharge any substance into the stormwater collection system or receiving waters which by its nature, may:
 - (a) Become a public health hazard endangering human or animal health.
 - (b) Interfere with the free and rapid flow of surface water,
 - (c) Be flammable or explosive,
 - (d) Be toxic to human, animal or plant life,
 - (e) Be corrosive or damaging to the stormwater collection system, or
 - (f) Affect adversely the State of North Carolina classification of the stream into which the discharge flows.
- (2) Non-allowable discharges include, but are not limited to, the following:
 - (a) Dumping of oil, anti-freeze, chemicals, garbage, paint or cleaning fluids,
 - (b) Untreated animal waste,
 - (c) Commercial car washes,
 - (d) Industrial discharges,
 - (e) Contaminated foundation drains,
 - (f) Cooling water unless no chemicals are added, and a NPDES permit is in place,
 - (g) Washwaters from commercial and industrial activities,
 - (h) Sanitary sewer discharges,
 - (i) Septic tank discharges,
 - (j) Washing machine discharges, and

- (k) Chlorinated backwash and draining associated with swimming pools.

(E) Illegal Connections to Stormwater Collection Systems

- (1) The construction, use, maintenance, or continued existence of illegal connections to the stormwater collection system is prohibited.
- (2) Any connection to the stormwater collection system which allows the discharge of non-stormwater, other than the exclusions listed in Section 6.14.12(C) of this Ordinance, is prohibited.
- (3) The prohibition of illegal connections expressly includes, without limitation, illegal connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of the connection.
- (4) A person is considered to be in violation of this Ordinance if the person connects a line conveying sewage to the stormwater collection system, or allows such a collection to continue.
- (5) Grace Periods
 - (a) Where such connections exist in violation of this Ordinance, the property owner, or person using said connection shall be required to remove the connection within one year following the notice of violation. This grace period shall not apply to connections which may result in the discharge of hazardous materials or other discharges which pose an immediate threat to health and safety, or are likely to result in immediate injury and harm to human, animal or plant life, and natural resources.
 - (b) Where it is determined that the one year grace period shall not apply, the Erosion Control Officer shall determine the time within which the connection shall be removed. In setting the time limit for compliance, the Erosion Control Officer shall take into consideration the following:
 - (i) The quantity and complexity of the work.
 - (ii) The consequences of delay.
 - (iii) The potential harm to the environment, to the public health, to public and private property, to wildlife, and to natural resources.
 - (iv) The cost of remedying the damage.

(F) Spills

- (1) Spills or leaks of polluting substances discharged to, or having the potential to reach the stormwater collection system or receiving waters, shall be contained, controlled, collected, and removed promptly. All affected areas shall be restored to their preexisting condition.
- (2) Notification of Spills
 - (a) Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation (the Financially Responsible Person) has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into or may reach the stormwater collection system or waters of Orange County, the Financially Responsible Person shall take all necessary steps to ensure the discovery, containment, and cleanup of such discharge.

- (b) In the event of such a discharge of hazardous materials, the Financially Responsible Person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services, and shall notify the Erosion Control Officer within 24 hours.
- (c) In the event of a discharge of non- hazardous materials, the Financially Responsible Person shall notify the Erosion Control Officer no later than the next business day.
- (d) All notifications shall be confirmed by written notice addressed and mailed to the County within three business days of the discharge.
- (e) Notification shall not relieve the Financially Responsible Person of:
 - (i) Any liability or expense related to the discharge.
 - (ii) Restoration of any area affected by the discharge to preexisting conditions.
 - (iii) Liability or violation of any regulatory body of the County, State or Federal government.

SECTION 6.15: SOIL EROSION AND SEDIMENTATION CONTROL

6.15.1 Purpose and Intent

(A) Overall

- (1) The regulations and standards included herein have been adopted for the purposes of:
 - (a) Regulating the clearing, grading, excavation, filling and manipulation of the earth and the moving and storing of waters in order to:
 - (i) Control and prevent accelerated soil erosion and sedimentation,
 - (ii) Prevent the pollution of water,
 - (iii) Prevent damage to public and private property,
 - (iv) Maintain the balance of nature,
 - (v) Prevent the obstruction of natural and artificial drainageways,
 - (vi) Inhibit flooding, and
 - (vii) Reduce the undermining of roads and other transportation facilities.
 - (b) Establishing procedures through which these purposes can be fulfilled.
- (2) It is the intent of the Board of County Commissioners that all of the departments and agencies of Orange County, its contractors and subcontractors shall comply with the regulations set forth in this Section.

(B) University Lake, Cane Creek, and Upper Eno Watersheds

- (1) The Board of County Commissioners find that, without strict sedimentation and erosion controls, the development of land within the University Lake, Cane Creek, and Upper Eno Watersheds will have a significant adverse impact upon the health, safety, and welfare of all persons served by the water supply reservoirs within these watersheds. More specifically:
 - (a) Stormwater runoff carries pollutants into water supply reservoirs, degrading water quality. These pollutants include, but are not limited to, organic and inorganic chemicals.

- (b) The increase in nutrients such as phosphorus and nitrogen will accelerate eutrophication of water supply reservoirs, adversely affecting flora and fauna.
 - (c) The improper channelization of watercourses and drainage areas in the University Lake, Cane Creek, and Upper Eno Watersheds will increase the velocity of runoff, thereby increasing erosion and sedimentation.
 - (d) The alteration of the natural topography and removal of vegetation will increase erosion by increasing velocity of runoff.
 - (e) The siltation of water bodies resulting from increased erosion will decrease the capacity of the water bodies to hold and transport water, and harm flora and fauna.
 - (f) Sedimentation further reduces water quality because it transports pollutants into the water, then releases them in the water as it settles.
 - (g) Impervious surfaces will increase the volume and rate of stormwater runoff. This allows less water to percolate into the soil, thereby decreasing groundwater recharge. Increased velocity of runoff also reduces the filtering effect of the soil.
 - (h) Improperly managed stormwater runoff will increase the incidence of flooding and the level of floods which occur.
- (2)** The regulations set forth in this Section that are applicable to the University Lake, Cane Creek, and Upper Eno Watersheds are designed:
- (a) To protect and maintain the chemical, physical and biological quality and integrity of water supply reservoirs within these watersheds and other critical watershed areas.
 - (b) To prevent harm to the residents of the community by prohibiting activities which adversely affect water supply reservoirs as a public water supply.
 - (c) To encourage the protection of natural systems and the utilization of these systems in a manner which does not impair their beneficial functioning.
 - (d) To discourage the construction of drainage systems which do not functionally approximate the natural drainage pattern.
 - (e) To minimize sedimentation and erosion, within the watersheds, and as a result, minimize the transport of sediment and pollutants.
 - (f) To protect and maintain the existing habitat of fish and wildlife.
 - (g) To prevent damage from flooding while recognizing that natural fluctuations in water levels are beneficial.
 - (h) To protect the absorptive, purifying and retentive functions of the natural systems existing in the University Lake, Cane Creek, and Upper Eno Watersheds area.
 - (i) To ensure the attainment of these objectives by requiring the approval and implementation of Sedimentation and Erosion Control Plans for all activities which may adversely affect the University Lake, Cane Creek, and Upper Eno Watersheds.
 - (j) To provide and enforce design and performance standards for control of post-development erosion and sedimentation in order to preserve the characteristics that existed in the University Lake, Cane Creek, and Upper Eno Watersheds Area prior to development.

6.15.2 Applicability

- (A) The soil erosion and sedimentation control provisions contained herein shall apply within Orange County, including the municipalities of Carrboro, Hillsborough, and the portion of Mebane within Orange County, but excluding the municipal boundaries and planning extraterritorial limits of Chapel Hill.
- (B) It shall be unlawful, within the jurisdiction of this Section, to engage in land-disturbing activity, except as provided herein, without first obtaining a permit as required by this Section and without complying with the conditions of the issuance of said permit.
- (C) Any person engaged in land-disturbing activities who fails to file a plan in accordance with this Ordinance, or who conducts a land-disturbing activity except in accordance with provisions of an approved plan shall be deemed in violation of this Ordinance.

6.15.3 Erosion Control Standards

(A) Orange County Standards

Requirements, standards, and specifications for erosion control plans and erosion control techniques, measures, and devices are contained in the Orange County Soil Erosion and Sediment Control Manual. Copies of the Manual are available from the Erosion Control Division of the Orange County Planning & Inspections Department.

(B) Revisions to the Standards

Corrections, revisions, and amendments to the Soil Erosion and Sediment Control Manual shall be made upon recommendation of the Erosion Control Officer and approval by the Orange County Board of Commissioners.

(C) Consistency Between Ordinance and Standards

Nothing in this Section shall be construed to allow approval of a plan which is inconsistent with the mandatory standards set forth in Section 6.15.7(B) of this Ordinance or any other provision of this Ordinance.

6.15.4 Exclusions

The regulations established within this Section shall not apply to the following land - disturbing activities:

(A) Agriculture

Activities undertaken on agricultural land for the production of plants and animals useful to man, including, but not limited to:

- (1) Forages and sod crops, grains and feed crops, tobacco, cotton and peanuts;
- (2) Dairy animals and dairy products;
- (3) Poultry and poultry products;
- (4) Livestock, including beef cattle, sheep, swine, horses, ponies, mules or goats, including the breeding and grazing of any or all such animals;
- (5) Bees and apiary products; and
- (6) Fur producing animals.

(B) Forestland

- (1) Activities undertaken on forestland for the production and harvesting of timber and timber products and conducted in accordance with best management practices set out in Forest Practice Guidelines Related to Water Quality as adopted by the Department.

- (2) If land-disturbing activity undertaken on forestland for the production and harvesting of timber and timber products is not conducted in accordance with Forest Practice Guidelines Related to Water Quality, the provisions of this Ordinance shall apply to such activity and any related land disturbing activity on the tract.

(C) Mining

Activities for which a permit is required under the Mining Act of 1971, Article 7 of Chapter 74 of the General Statutes.

(D) State Jurisdiction

Those land-disturbing activities over which the State by statute (G.S. 113A-56(a)) has exclusive regulatory jurisdiction, which are activities:

- (1) Conducted by the State,
- (2) Conducted by the United States,
- (3) Conducted by persons having the power of eminent domain,
- (4) Conducted by local governments, or
- (5) Funded in whole or in part by the State or the United States.

6.15.5 General Requirements for Areas Other Than University Lake, Cane Creek, and Upper Eno Watersheds

(A) Protection of Property

- (1) Person(s) conducting land-disturbing activities shall take all reasonable measures to protect all public and private property from damage by such activities.
- (2) The disposal of trees, limbs, stumps and construction debris associated with the activities shall be by some method other than open burning.
- (3) This requirement shall apply to any areas to be disturbed, regardless of the size of the area to be uncovered.

(B) Erosion Control Plan Requirement

- (1) Prior to the commencement of any land-disturbing activity that will result in the uncovering of more than 20,000 square feet of land, the person(s) conducting the land-disturbing activity must prepare and submit an Erosion Control Plan for the proposed site.
- (2) The Plan shall specify the method of disposal of trees, limbs, stumps and construction debris associated with the activity; which shall be by some method other than open burning.
- (3) The Plan must be approved and a Land Disturbing Permit obtained prior to the start of the disturbance.

6.15.6 General Requirements for University Lake, Cane Creek, and Upper Eno Watersheds

(A) Protection of Property

- (1) Persons conducting land-disturbing activity shall take all reasonable measures to protect all public and private property from damage by such activities.
- (2) This requirement shall apply to any area to be disturbed.

(B) Erosion Control Plan Requirement

- (1) Except as otherwise provided in Section 6.15.6(C), an erosion and sedimentation control plan shall be prepared and filed with and approved by the Erosion Control Division prior to the commencement of any land-disturbing activity within the University Lake, Cane Creek, and Upper Eno Watersheds.
- (2) The Plan shall specify the method of disposal of trees, limbs, stumps and construction debris associated with the activity; which shall be by some method other than open burning.

(C) Erosion Control Plan Waiver

- (1) The person(s) conducting the land-disturbing activity need not submit an Erosion Control Plan if such person obtains an Erosion Control Plan Waiver from the Erosion Control Division.
- (2) An application for this waiver shall be submitted to the Erosion Control Officer and shall contain the following:
 - (a) The name, address, and phone number of the developer and owner,
 - (b) A description and drawing of the proposed development or activity,
 - (c) The location of the development, and
 - (d) Any other information requested by the Orange County Erosion Control Officer that is reasonably necessary to evaluate the proposed development.
- (3) The Erosion Control Officer shall issue the Plan Waiver if he/she finds the following:
 - (a) The land-disturbing activity will not result in the uncovering of more than 10,000 square feet; and
 - (b) The land-disturbing activity is not to be conducted in connection with any of the following types of developments:
 - (i) Shopping centers,
 - (ii) Industrial and commercial facilities,
 - (iii) Major subdivisions,
 - (iv) Roads, or
 - (v) Any activity involving the temporary or permanent storage (above or below ground) of any noxious, toxic, or hazardous substance, including fuel storage facilities.
 - (c) The proposed land-disturbing activity will not:
 - (i) Significantly increase or decrease the rate or volume of surface water runoff;
 - (ii) Significantly contribute to the degradation of water runoff;
 - (iii) Have a significant adverse impact on a wetland, watercourse, or water supply reservoir;
 - (iv) Occur within a buffer area circumscribing a water supply reservoir; or
 - (v) Involve open burning of trees, limbs, stumps and construction debris associated with the permitted activity.

6.15.7 Design and Performance Standards

(A) Basic Control Objectives

An Erosion and Sedimentation Control Plan may be disapproved pursuant to Section 2.19 of this Ordinance if the plan fails to address the following control objectives:

(1) Identify Critical Areas

On-site areas which are subject to severe erosion, and off-site areas which are especially vulnerable to damage from erosion and/or sedimentation, are to be identified and receive special attention, and appropriate mitigative measures are to be taken to protect those areas.

(2) Plan for Erosion Control

- (a) Design the development and prepare the site plan so that the necessary sediment-trapping devices and erosion control measures can be accommodated and are accessible for maintenance and removal.
- (b) Observe the requirements and standards in Orange County's Soil Erosion and Sediment Control Manual and the North Carolina Erosion and Sediment Control Planning and Design Manual.

(3) Limit Exposed Areas

All land-disturbing activities are to be planned and conducted to minimize the size of the area to be exposed at any one time.

(4) Limit Time of Exposure

All land-disturbing activities are to be planned and conducted to limit exposure to the shortest feasible time.

(5) Control Surface Water

Surface water runoff originating upgrade of exposed areas should be controlled to reduce erosion and sediment loss during the period of exposure.

(6) Control Sedimentation

All land-disturbing activities are to be planned and conducted so as to prevent off-site sedimentation damage.

(7) Manage Stormwater Runoff

When the increase in the peak rates and velocity of storm water runoff resulting from a land-disturbing activity is sufficient to cause accelerated erosion of the receiving watercourse, plans are to include measures to control the velocity and the rate of release at the point of discharge so as to minimize accelerated erosion of the site and increased sedimentation of the stream.

(8) Open Burning

The Plan should specify the method of disposal of trees, limbs, stumps and construction debris associated with the activity; which shall be by some method other than open burning.

(B) Mandatory Design and Performance Standards for Land-Disturbing Activity

No land-disturbing activity subject to the provisions of this Section shall be undertaken except in accordance with the following mandatory standards:

(1) Buffer Zone

- (a) No land-disturbing activity during periods of construction or improvement to land shall be permitted in proximity to a lake or natural watercourse unless a buffer zone is provided along the margin of the watercourse of sufficient width to confine visible siltation within the 25% of the buffer zone nearest the land-disturbing activity.

- (b) Unless otherwise provided, the width of a buffer zone is measured from the edge of the water to the nearest edge of the disturbed area, with the 25% of the strip nearer the land disturbing activity containing the natural or artificial means of confining visible siltation.
- (c) Waters Classified as Trout Waters by the Environmental Management Commission
 - (i) Waters that have been classified as trout waters by the Environmental Management Commission shall have an undisturbed buffer zone 25 feet wide or of sufficient width to confine visible siltation within the 25% of the buffer zone nearest the land-disturbing activity, whichever is greater.
 - (ii) The 25 foot minimum width for an undisturbed buffer zone adjacent to designated trout waters shall be measured horizontally from the top of the bank.
 - (iii) The County may approve plans which include land-disturbing activity along trout waters when the duration of said disturbance would be temporary and the extent of said disturbance would be minimal. This subsection shall not apply to a land-disturbing activity in connection with the construction of facilities to be located on, over, or under a lake or natural watercourse.
 - (iv) Where a temporary and minimal disturbance is permitted as an exception by Section 6.15.7(B)(1)(c)(iii) of this Ordinance, land-disturbing activities in the buffer zone adjacent to designated trout waters shall be limited to a maximum of 10% of the total length of the buffer zone within the tract to be disturbed, such that there is not more than 100 linear feet of disturbance in each 1000 linear feet of buffer zone. Larger areas may be disturbed with the written approval of the Director of the Division of Land Resources of the Department of Environment and Natural Resources.
 - (v) No land-disturbing activity shall be undertaken within a buffer zone adjacent to designated trout waters that will cause adverse temperature fluctuations, as set forth in 15 NCAC 2B.0211 Fresh Surface Water Classification and Standards, in these waters.

(2) Graded Slopes and Fills

- (a) The angle for graded slopes and fills shall be no greater than the angle which can be retained by vegetative cover or other adequate erosion control devices or structures.
- (b) Slopes left exposed shall, within 21 calendar days of completion of any phase of grading, be planted or otherwise provided with ground cover, devices, or structures sufficient to restrain erosion.

(3) Undisturbed Area

Because soils which are seriously disturbed, even if re-vegetated, can generate nearly as much run-off as paved areas, a portion of property being developed within watershed critical areas must remain undisturbed during construction. See Table 6.15.7.B.3: Undisturbed Area (below).

TABLE 6.15.7.B.3: UNDISTURBED AREA	
DISTRICT	UNDISTURBED AREA
UNIV-CA CANE-CA U-ENO-CA	The area necessary to meet impervious surface requirements shall remain undisturbed during the construction process. The area to remain undisturbed shall include portions of the lot utilized for stormwater infiltration. All clearing limits shall be clearly marked and observed.
All other Watershed Overlay Districts	As may be required pursuant to an approved grading permit or erosion control plan.

(4) Ground Cover

- (a) Whenever land-disturbing activity is undertaken on a tract comprising more than 20,000 square feet, if more than 20,000 square feet are uncovered, the person conducting the land-disturbing activity shall install such sedimentation and erosion control devices and practices as are sufficient to retain the sediment generated by the land-disturbing activity within the boundaries of the tract during construction upon and development of said tract, and shall plant or otherwise provide a permanent ground cover sufficient to restrain erosion after completion of construction or development.
- (b) Except as provided in Section 6.15.7(B)(6)(e) of this Ordinance, provisions for a ground cover sufficient to restrain erosion must be accomplished within 15 working days or 90 calendar days, whichever period is shorter, following completion of construction or development.

(5) Design Storm

- (a) Except as provided in Section 6.15.7(B)(6)(b) of this Ordinance and in the standard for sediment ponds in the Soil Erosion and Sediment Control Manual, erosion and sedimentation control measures, structures, and devices shall be so planned, designed, and constructed as to provide protection from accelerated erosion and sedimentation from the calculated maximum peak rates of runoff from the ten-year frequency storm.
- (b) Runoff rates shall be calculated using the procedures in the USDA Soil Conservation Service's "National Engineering Field Manual for Conservation Practices," or other calculation procedures acceptable to the Erosion Control Officer.

(6) Standards for High Quality Waters

In High Quality Water (HQW) zones the following design standards shall apply:

- (a) Uncovered Areas
 - (i) Uncovered areas in HQW zones shall be limited at any time to a maximum total area of 20 acres within the boundaries of the tract.

- (ii) Larger areas may be uncovered within the boundaries of the tract with the written approval of the Director of the Division of Land Resources of the Department of Environment and Natural Resources.
- (b) Erosion and Sedimentation Controls
 - (i) Erosion and sedimentation control measures, structures, and devices within HQW zones shall be so planned, designed, and constructed to provide protection from the runoff of the 25-year storm which produces the maximum peak rate of runoff.
 - (ii) The peak rate of runoff shall be calculated according to procedures in the United States Department of Agriculture Soil Conservation Service's National Engineering Field Manual for Conservation Practices or according to procedures adopted by any other agency of this state or the United States or any generally recognized organization or association.
- (c) Sediment Ponds
 - (i) Sediment ponds (also called "sediment basins") within HQW zones shall be designed and constructed such that the pond will have a settling efficiency of at least 70% for the 40 micron (0.04 mm) size soil particle transported into the basin by the runoff of that 2-year storm which produces the maximum peak rate of runoff.
 - (ii) The peak rate of runoff shall be calculated according to procedures in the United States Department of Agriculture Soil Conservation Service's National Engineering Field Manual for Conservation Practices or according to procedures adopted by any other agency of this state or the United States or any generally recognized organization or association.
- (d) Open Channels
 - (i) Newly constructed open channels in HQW zones shall be designed and constructed with side slopes no steeper than 2 horizontal to 1 vertical if a vegetative cover is used for stabilization
 - (ii) Steeper slopes may be permitted if soil conditions permit a steeper slope or where the slopes are stabilized by using mechanical devices, structural devices or other acceptable devices.
 - (iii) In any event, the angle for side slopes shall be sufficient to restrain accelerated erosion.
- (e) Ground Cover
 - (i) Ground cover sufficient to restrain erosion must be provided for any portion of a land disturbing activity in a HQW zone within 15 working days or 60 calendar days, whichever period is shorter, following completion of construction or development.

(7) Prior Plan Approval

No person shall initiate any land-disturbing activity on a tract if more than 20,000 square feet are to be uncovered unless, 30 or more days prior to initiating the activity, an erosion and sedimentation control plan for such activity is filed with the County and approved, and a Land Disturbing Permit obtained from the County. The land-disturbing activity shall be conducted in accordance with the approved erosion and sedimentation control plan.

(C) Additional Standards for Land-Disturbing Activity in University Lake, Cane Creek, and Upper Eno Watersheds

In addition to the provisions of Subsection (B) above, the design, construction, and maintenance of drainage systems in developments within the University Lake, Cane Creek, and Upper Eno Watersheds shall also be consistent with the following standards, and these standards shall control to the extent that they are more restrictive than those set forth in Subsection (B) above:

(1) Channeling Runoff

- (a) Channeling runoff directly into water bodies shall be prohibited.
- (b) Runoff shall be routed through swales and other systems designed to increase time of concentration, decrease velocity, increase infiltration, allow suspended solids to settle, and remove pollutants.

(2) Alteration of Watercourses

- (a) Natural watercourses shall not be dredged, cleared of vegetation, deepened, widened, straightened, stabilized or otherwise altered except in accordance with an approved Erosion Control Plan.
- (b) Water shall be retained or detained before it enters any natural watercourse in order to preserve the natural hydro-dynamics of the watercourse and to prevent sedimentation.

(3) Limit Land-Disturbing Activity

- (a) The area of disturbance by development shall be as small as practical.

(4) Land Alterations

- (a) No grading, cutting or filling shall be commenced until erosion and sedimentation control devices have been installed between the disturbed area and water bodies, watercourses, wetlands, or adjoining properties.

(5) Wetland Protection

- (a) Wetlands and other water bodies shall not be used as sediment traps during development.

(6) Maintenance Requirements and Responsibility

- (a) Erosion and sedimentation facilities shall receive regular maintenance to ensure that they continue to function properly.
- (b) Temporary basins shall be cleaned out when they are filled to 50% of their design capacity.

(7) Artificial Watercourses

- (a) Any artificial watercourse (where the need is demonstrated) shall be designed considering soil type so that the velocity of flow is low enough to prevent accelerated erosion.

(8) Buffer Area Requirements

-
- (a) Soil and pollutants carried over land, primarily from roads, trails, and/or land-disturbing activities, can be effectively trapped by leaving a relatively undisturbed strip of vegetation parallel and adjacent to the watercourse.
- (b) Properly managed overland water flow can be directed into this buffer area in a manner that will reduce velocity and cause dispersion of the water. Sediments carried by the water will settle out as a result of this slowing and dispersion process.
- (c) The width of these buffer areas shall depend on the type of stream or drainage area and shall be determined as follows:
- (i) Creeks and tributaries - (i.e., permanent streams flowing directly into a water supply reservoir within University Lake, Cane Creek, and Upper Eno Watersheds and permanent streams flowing into such streams).
- a. Measure along a line running perpendicular to the edge of the floodplain 50 feet from the edge of the floodplain plus an additional distance equal to: $4 \times \text{slope} \times 100$.
- b. If no floodplain has been demarcated, measure along a line running perpendicular to the center of the watercourse. Measure the 50 feet from the edge of the water.
- c. "Slope" is expressed as a percentage derived by dividing the rise in elevation between the floodplain boundary line (or centerline of the watercourse per above) and a point 100 feet from that point along the above described perpendicular line, by 100.
- (ii) Intermittent streams flowing into creeks and tributaries.
- a. Measure along a line running perpendicular to the centerline of the intermittent stream 50 feet from such stream centerline.
- (iii) Intermittent streams flowing directly into water supply reservoirs within University Lake, Cane Creek, and Upper Eno Watersheds.
- a. Measure along a line running perpendicular to the centerline of the intermittent stream 100 feet from such stream centerline.
- (iv) Intermittent streams flowing into streams which flow directly into water supply reservoirs within University Lake, Cane Creek, and Upper Eno Watersheds.
- a. Measure along a line running perpendicular to the centerline of the intermittent stream 50 feet from such stream centerlines.
- (v) Water supply reservoirs within University Lake, Cane Creek, and Upper Eno Watersheds.
- a. Measure along a line running perpendicular to the high water mark or floodplain boundary (whichever is farther from the Lake) 100 feet from such high water mark or floodplain boundary plus an additional distance equal to: $4 \times \text{slope} \times 100$
- b. "Slope" is expressed as a percentage derived by dividing the rise in elevation between the high water line of the Lake and a point 100 feet from that point along the above described perpendicular line, by 100.

- (d) The existing natural vegetation in the designated buffer areas shall not be disturbed in any way that would reduce the area's effectiveness in achieving the objectives set forth in this subsection.
- (e) Buffer areas from which the vegetative cover has been removed shall be planted or otherwise provided with ground cover devices or structures sufficient to allow the buffer area to accomplish the objectives set forth in this subsection.
- (f) Buffers shall not be used as temporary erosion control devices during construction.

(9) Sediment Storage

- (a) Sediment shall be retained on the site of the development.

(10) Detention or Retention Areas –

- (a) Retention and detention ponds may be used to retain and detain the increased and accelerated runoff which the development generates.
- (b) Water shall be released from detention ponds into watercourses or wetlands at a rate and in a manner approximating the natural flow which would have occurred before development.
- (c) Retention and detention ponds shall be designed so that they maintain their structural integrity when subject to a 100-year storm.
- (d) Detention and retention areas shall be designed so that shorelines are sinuous rather than straight and so that the length of the shoreline is maximized, thus offering more space for the growth of littoral vegetation.
- (e) The banks of detention and retention areas shall slope at a gentle grade into the water as a safeguard against drowning, personal injury or other accidents, to encourage the growth of vegetation and to allow the alternate flooding and exposure of the areas along the shoreline as water levels periodically rise and fall.

(11) Open Space

- (a) The use of drainage facilities and vegetated buffer zones as open space, recreation, and conservation areas shall be encouraged.
- (b) Recreational activities undertaken in these open space areas shall be limited to passive or leisure activities.

(12) Grassed Swales

- (a) Drainage within the development shall be accommodated by the natural drainage systems whenever possible.
- (b) The use of grassed drainageways to channel water shall be encouraged.
- (c) The velocity of travel in this grassed swale shall range between 2-4 feet/second.

(13) Retention of Runoff from Industrial Sites

- (a) On sites developed for industrial purposes (i.e., uses involving the manufacturing, processing, creating, repairing, renovating, painting, cleaning, or assembly of goods, merchandise, or equipment), retention or detention areas meeting the standards set forth in Section 6.15.7(C)(10) shall be used to insure that runoff is retained on the site before being released. The purpose of this requirement is to insure that, not only will the standard set forth in Section 6.15.8(A) be met, but also a mechanism will be provided to safeguard the watershed against the spillage of toxic or dangerous substances.

(D) Additional Standards for Borrow and Waste Areas

- (1) When the person conducting the land-disturbing activity is also the person conducting the borrow and waste disposal activity, areas from which borrow is obtained and which are not regulated by the provisions of the Mining Act of 1971, and waste areas for surplus materials other than landfills regulated by the Department's Division of Solid Waste Management shall be considered as part of the land-disturbing activity where the borrow material is being used or from which the waste material originated.
- (2) When the person conducting the land-disturbing activity is not the person obtaining the borrow and/or disposing of the waste, these areas shall be considered a separate land-disturbing activity.

(E) Additional Standards for Access and Haul Roads

- (1) Temporary access and haul roads, other than public roads, constructed or used in connection with any land-disturbing activity shall be considered a part of such activity.
- (2) For development in the University Lake, Cane Creek, and Upper Eno Watersheds, these access and haul roads shall have gravel pads placed at the entrance of the site of a land-disturbing activity.

(F) Additional Standards for Operations in Lakes or Other Natural Watercourses

- (1) Land-disturbing activity in connection with construction in, on, over or under a lake or natural watercourse shall be planned and conducted in such a manner as to minimize the extent and duration of disturbance of the stream channel.
- (2) The relocation of a stream, where relocation is an essential part of the proposed activity, shall be planned and executed so as to minimize changes in the stream flow characteristics except when justification for significant alteration to flow characteristics is provided.
- (3) Every effort shall be made to maintain buffer zones consisting of existing vegetation between the land-disturbing activity and the watercourse.

(G) Additional Standards for Economic Development Districts

The following additional standards shall apply within the Economic Development Districts:

- (1) Lot grading must be done in such a way as to preserve the topographic features and maintain natural drainage patterns, and to provide positive drainage. In locating buildings, parking, and other features on the site, the following standards must be met:
 - (a) Minimize disturbance and phase development wherever practical.
 - (b) Preserve existing vegetation, especially significant stands of trees along drainageways, on steep slopes, and in buffer areas.
 - (c) Use the natural shape of the land with minimal grading to locate features in a way that minimized impacts on and off the site.
- (2) All site grading must be designed to meet the standards shown on the following table:

TABLE 6.15.7.G.2: SLOPE GRADING STANDARDS		
SITE AREA	MINIMUM SLOPE	MAXIMUM SLOPE
Planting Areas	2%	3:1
Parking Lot Pavement	2%	4%
Driveways and Access Drives	2%	5%
Pedestrian Plaza Areas	1%	2%
Sidewalks	1%	8%

- (3) No cut or fill slopes of any type may be steeper than 3:1 and must have smooth vertical transitions. Where space limitations demand, terracing with approved retaining walls will be utilized. Where retaining walls are used, they must be constructed of a material compatible with the building architecture.
- (4) Berms, channels, swales, etc. must be graded in such a way as to be an integral part of the landscape, and paved surfaces must be designed with smooth vertical transitions between changes in slope.
- (5) In order to minimize soil erosion, practical combinations of the following shall be used:
 - (a) Expose the smallest practical area of cleared land during construction.
 - (b) Temporary ditches, dikes, vegetation, and/or mulching must be used to protect critical areas exposed during development or construction.
 - (c) Sediment control measures must be installed and maintained to remove sediment from run-off waters during development.
 - (d) Permanent landscaping and groundcover must be installed as soon as practical after construction activities are completed.
 - (e) Temporary groundcover must be used for fill material subject to erosion and on construction projects over six months duration.

6.15.8 Stormwater Outlet Protection

(A) Control of Discharge in University Lake, Cane Creek, and Upper Eno Watersheds

After development of a site, the peak discharge of stormwater runoff resulting from a ten-year storm shall be no greater than that which would result from a ten-year storm on the same site prior to development. This requirement shall apply to the following:

- (1) Commercial, industrial, office, and institutional developments,
- (2) Multi-family residential developments of more than ten units, and
- (3) Single-family detached residential developments where more than three lots are to be created.

(B) Control of Velocity

- (1) Persons shall plan and conduct land-disturbing activity so that the post-construction velocity of the 10-year storm runoff in the receiving watercourse to the discharge point does not exceed the greater of:
 - (a) The velocity established by the table in Section 6.15.8(C)(3) of the subsection; or
 - (b) The velocity of the 10-year storm runoff in the receiving watercourse prior to development.

- (2) If conditions (a) or (b) of this Subsection above cannot be met, then the receiving watercourse, to and including the discharge point, shall be designed and constructed to withstand the expected velocity anywhere the velocity exceeds the "prior to development" velocity by 10%.

(C) Standards

(1) Intent

Stream banks and channels downstream from any land disturbing activity shall be protected from increased degradation by accelerated erosion caused by increased velocity of runoff from the land disturbing activity.

(2) Acceptable Management Measures

- (a) Measures applied alone or in combination to satisfy the intent of this Subsection are acceptable if there are no objectionable secondary consequences.
- (b) Innovative techniques and ideas will be considered and may be used when shown to have the potential to produce successful results. Some alternatives are to:
- (i) Avoid increases in surface runoff volume and velocity by including measures to promote Infiltration to compensate for increased runoff from areas rendered impervious;
 - (ii) Avoid increases in stormwater discharge velocities by using vegetated or roughened swales and waterways in lieu of closed drains and high velocity paved sections;
 - (iii) Provide energy dissipaters at outlets of storm drainage facilities to reduce flow velocities to the point of discharge; these may range from simple rip-rapped sections to complex structures; and
 - (iv) Protect watercourses subject to accelerated erosion by improving cross sections and/or providing erosion-resistant lining.

(3) Permissible Velocities

TABLE 6.15.8.C.3: MAXIMUM PERMISSIBLE VELOCITIES		
MATERIAL	FPS	MPS
Fine Sand (noncolloidal)	2.5	0.8
Sandy Loam (noncolloidal)	2.5	0.8
Silt Loam (noncolloidal)	3.0	0.9
Ordinary Firm Loam	3.5	1.1
Fine Gravel	5.0	1.5
Stiff Clay (very colloidal)	5.0	1.5
Graded, Loam to Cobbles (noncolloidal)	5.0	1.5
Graded, Silt to Cobbles (colloidal)	5.5	1.7
Alluvial Silts (noncolloidal)	3.5	1.1
Alluvial Silts (colloidal)	5.0	1.5
Coarse Gravel (noncolloidal)	6.0	1.8
Cobbles and Shingles	5.5	1.7
Shale and Hard Pans	6.0	1.8

Source: Adapted from recommendations by the Special Committee on Irrigation Research, American Society of Civil Engineers, 1926, for channels with straight alignment. For sinuous channels, multiply allowable velocity by 0.95 for slightly sinuous channels, by 0.9 for moderately sinuous channels, and by 0.8 for highly sinuous channels.

(4) Exceptions

This rule shall not apply in areas other than the University Lake, Cane Creek, and Upper Eno Watersheds where it can be demonstrated that storm water discharge velocities will not create an erosion problem in the receiving watercourse.

6.15.9 Responsibility for Installation and Maintenance

(A) On-Site Facilities

- (1) During the development of a site, the person engaged in or conducting the land-disturbing activity shall be responsible for installing and maintaining all temporary and permanent erosion and sedimentation control measures and facilities as required by the approved or revised Erosion Control Plan, any provision of this Ordinance, the Act, or any order adopted pursuant to this Ordinance or the Act.
- (2) The responsibility for installing and maintaining permanent erosion and sedimentation control measures and facilities after completion of the site development shall lie with the land owner or person in possession or control of the land except facilities and measures installed within road or street rights-of-way or easements accepted for maintenance by a government agency.

(B) Off-Site Facilities

- (1) The Erosion Control Officer may allow stormwater runoff that is charged in volumes or at rates in excess of those otherwise allowed by this Ordinance to be discharged into drainage facilities off the site of development if the off-site facilities and the channels leading to them are designed, constructed, and maintained in accordance with the standards of this Ordinance.
- (2) Adequate provision must be made for the sharing of the construction and maintenance expenses of the facilities.
- (3) A request to use off-site drainage facilities and all information related to the proposed off-site facilities should be made part of the developer's erosion and sedimentation control plan.

(C) Additional Measures

Whenever the Erosion Control Officer determines that significant sedimentation is occurring as a result of land-disturbing activity, despite application and maintenance of protection practices, the person conducting the land-disturbing activity or the person responsible for maintenance will be required to take additional protective action.

6.15.10 Existing Uncovered Areas

(A) Existing Sites

All uncovered areas existing on the effective date of this Ordinance which are consistent with the following:

- (1) Resulted from land-disturbing activities not excluded under Section 6.15.4, and
- (2) Are outside the University Lake, Cane Creek, and Upper Eno Watersheds and exceed 20,000 square feet, and
- (3) Are subject to continued accelerated erosion, and
- (4) Are causing off-site damage from sedimentation,

Shall be provided with a ground cover or other protective measures, structures, or devices sufficient to restrain accelerated erosion and control off-site sedimentation.

(B) Notice of Violation

**Erosion Control & Stormwater Requirements
For Land Disturbing Activities
FAQ's**

1. Is single-family residential exempt from Erosion Control & Stormwater requirements?

- No. The Unified Development Ordinance considers both residential and commercial projects as land disturbance.

2. Are there any exemptions from Erosion Control & Stormwater requirements?

- Current exemptions for land disturbance come from the Sedimentation Pollution Control Act of 1973 and are outlined below. If you believe you qualify for such an exemption, we ask that you complete an Orange County Sworn Declaration of Exemption for Land Disturbing Activity Pursuant to NCGS 113A-52.01. This will be saved to the Parcel Manager module of our Land Management Central Permitting System and available to all with access to ascertain the nature of your land disturbing activities. This will help minimize our efforts in responding to any related inquiries, including observations by Orange County staff.
- Please note that, if there is a residential development component to the land disturbing activity, land disturbance related to the residential development is not exempt and will be subject to Land Disturbing Permit requirements.
- Exempt land disturbing activities include...
 - (1) Activities, including the production and activities relating or incidental to the production of crops, grains, fruits, vegetables, ornamental and flowering plants, dairy, livestock, poultry, and all other forms of agriculture undertaken on agricultural land for the production of plants and animals useful to man, including:
 - a) Forages and sod crops, grains and feed crops, tobacco, cotton, and peanuts.
 - b) Dairy animals and dairy products.
 - c) Poultry and poultry products.
 - d) Livestock, including beef cattle, llamas, sheep, swine, horses, ponies, mules, and goats.
 - e) Bees and apiary products.
 - f) Fur producing animals.
 - g) Mulch, ornamental plants, and other horticultural products. For purposes of this section, "mulch" means substances composed primarily of plant remains or mixtures of such substances.

- (2) Activities undertaken on forestland for the production and harvesting of timber and timber products and conducted in accordance with standards defined by the Forest Practice Guidelines Related to Water Quality (Best Management Practices), as adopted by the North Carolina Department of Agriculture and Consumer Services.
- (3) Activities for which a permit is required under the Mining Act of 1971, Article 7 of Chapter 74 of the General Statutes.
- (4) For the duration of an emergency, activities essential to protect human life, including activities specified in an executive order issued under G.S. 166A-19.30(a)(5).
- (5) Activities undertaken to restore the wetland functions of converted wetlands to provide compensatory mitigation to offset impacts permitted under Section 404 of the Clean Water Act.
- (6) Activities undertaken pursuant to Natural Resources Conservation Service standards to restore the wetlands functions of converted wetlands as defined in Title 7 Code of Federal Regulations § 12.2 (January 1, 2014 Edition). (1993 (Reg. Sess., 1994), c. 776, s. 2; 1997- 84, s. 1; 2014-100, s. 14.7(k); 2015-263, s. 19; 2016-113, s. 14.)

3. How much can I clear or grade without requiring an Erosion Control Plan, Land Disturbing Permit, and/or a Stormwater Management Plan?

- The following watershed matrix outlines land disturbance thresholds for erosion control, stormwater, and nutrient exports for each watershed in the County.
- Special conditions apply in the following watersheds:
 - University Lake Watershed / University Lake Critical Area
 - Cane Creek Watershed / Cane Creek Critical Area
 - Upper Eno Watershed / Upper Eno Critical Area

The Board of County Commissioners requires Staff to review any proposed disturbance in the above noted watersheds due to the proximity of these areas to surface waters. As long as the project is less than the 10,000 square feet erosion control threshold, no additional plans need to be submitted. The building permit application will be evaluated and if no issues are noted, a Waiver will be issued for the project at no cost. The applicant will be required to sign the Waiver, acknowledging the conditions set forth therein.

4. Who should I contact if I have further questions concerning Erosion Control & Stormwater requirements in Orange County?

Orange County Erosion Control staff can be reached at (919) 245-2575. This is the main line for the Department. You will be directed to one of the following staff: Steve Kaltenbach, Kenneth Owens, or Nathan Jacobsen.



When do I need an erosion control plan, land disturbing permit and/or a stormwater management plan?

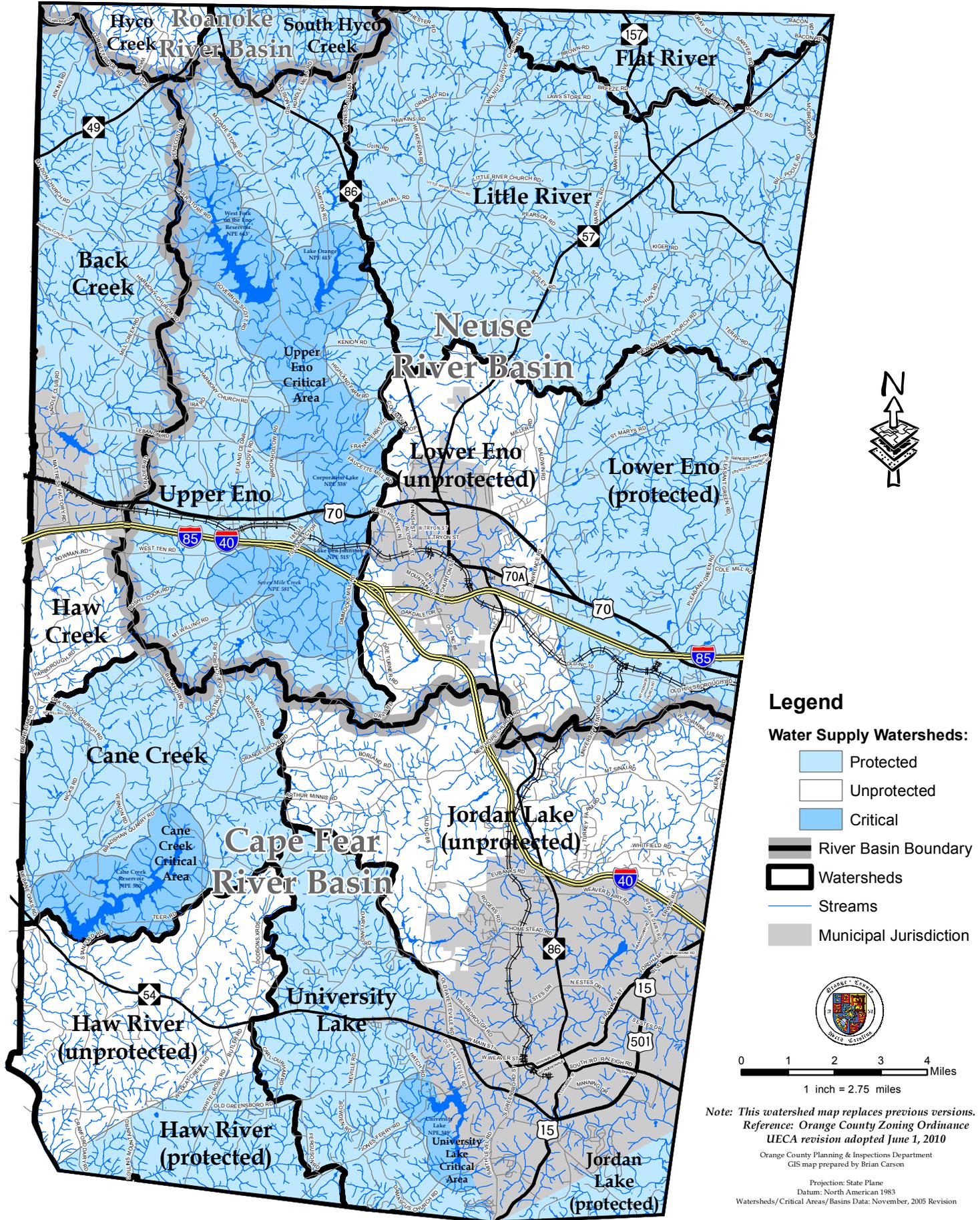
When proposed land disturbance exceeds thresholds listed below.

WATERSHED			EROSION CONTROL (OC UDO)	STORMWATER (15A NCAC 02B .0265 Jordan Rules; 15A NCAC 02B .0277 Falls Rules)		NUTRIENTS	
				Other	SFH / Duplex or Recreational	N	P
CAPE FEAR	Haw River Arm	Back Creek (protected)	20,000	21,780	43,560	3.8	1.43
		Haw Creek (unprotected)	20,000	21,780	43,560	3.8	1.43
		Cane Creek (protected)	*10,000	21,780	43,560	3.8	1.43
		Cane Creek Critical Area	*10,000	21,780	43,560	3.8	1.43
		Haw River (protected)	20,000	21,780	43,560	3.8	1.43
		Haw River (unprotected)	20,000	21,780	43,560	3.8	1.43
	U New Hope Arm	Jordan Lake (unprotected)	20,000	21,780	43,560	2.2	0.82
		Jordan Lake (protected)	20,000	21,780	43,560	2.2	0.82
		University Lake (protected)	*10,000	21,780	43,560	2.2	0.82
		University Lake Critical Area	*10,000	21,780	43,560	2.2	0.82
NEUSE	Falls Lake	Flat River (protected)	20,000	12,000	21,780	2.2	0.33
		Little River (protected)	20,000	12,000	21,780	2.2	0.33
		Upper Eno (protected)	*10,000	12,000	21,780	2.2	0.33
		Upper Eno Critical Area	*10,000	12,000	21,780	2.2	0.33
		Lower Eno (unprotected)	20,000	12,000	21,780	2.2	0.33
		Lower Eno (protected)	20,000	12,000	21,780	2.2	0.33
ROANOKE	Hyco Creek (unprotected)		20,000	NA	NA	NA	NA
	South Hyco Creek (protected)		20,000	43,560	43,560	NA	NA

Notes:

1. Thresholds are listed in square feet
2. Not part of larger development
3. Nutrients listed in pounds/acre/year
4. 43,560 square feet = 1 acre
5. 21,780 square feet = 1/2 acre
6. 10,890 square feet = 1/4 acre
7. Also be aware your site plan may be constrained by riparian buffer requirements and impervious limitations, in addition to typical zoning setback requirements.
8. **Jordan Lake nutrient export regulations not currently enforced.** *Waiver required

Orange County Watersheds



Activity 510

ORANGE COUNTY, NORTH CAROLINA
COMMUNITY RATING SYSTEM (CRS) RECERTIFICATION – AUGUST 2022
ACTIVITY 510 – FLOODPLAIN MANAGEMENT AND PLANNING:

The County adopted a regional Hazard Mitigation plan in 2015, the Eno-Haw Regional Hazard Mitigation Plan, as reported in past CRS re-certification cycles.

The County, working with its various planning partners, has completed and adopted the 2020 update of this document.

CRS ACTIVITY 510:

2022 CRS RECERTIFICATION PROGRESS REPORT FOR

FLOODPLAIN MANAGEMENT/HAZARD MITIGATION PLAN:

Date this Report was Prepared: July 29, 2022

Name of Community: Orange County, North Carolina

Name of Plan: Eno-Haw Regional Hazard Mitigation Plan

Date of Adoption of Plan: NC Department of Public Safety – July 17, 2020
Orange County Board of Commissioners –
September 1, 2020

5 Year CRS Expiration Date: July of 2025

1. How can a copy of the credited Plan be obtained:

- Hard copies of the Plan are available at the County Planning Offices located at 131 West Margaret Lane – West Campus Office Building – Suite 201;
- A hard copy will be made available at the Orange County Library Main Branch, also off of Margaret Lane in downtown Hillsborough, within the reference department. ¹
- A copy of the plan is available on the County website at:

<https://www.orangecountync.gov/672/Eno-Haw-Regional-Hazard-Mitigation-Plan>

2. Describe how this *annual progress report* (not the credited Plan) was prepared and how it was submitted to the governing body, released to the media, and made available to the public:

This annual progress report will be posted on the Orange County floodplain website at <https://www.orangecountync.gov/1325/Floodplain-Management> and will be shared with Orange County Public Library staff, our governing body, and local media, as applicable in the coming weeks.

Orange County, in partnership the Town(s) of Carrboro, Chapel Hill, Hillsborough, the County of Durham and its encompassed municipalities, the County of Alamance and its encompassed incorporated areas, updated the "*Orange County Hazard Mitigation Plan*" in accordance with State and Federal requirements. This

plan was originally adopted by the BOCC on June 16, 2015. For the 2020 update, Person County and its encompassed incorporated joined the planning process.

PLANNING PROCESS:

The plan update process, was led by Orange County Emergency Services, with technical assistance from the State of North Carolina and consulting firm AECOM.

A local Hazard Mitigation Planning Committee was made up of local officials, representatives, and stakeholders to guide this process.

In addition, local points of contact were established for each of the three participating counties as well as all of the participating municipal jurisdictions.

Project work was initiated in July of 2014.

The process for updating the Eno-Haw Regional Hazard Mitigation Plan consistent of six phases summarized as follows:

- a. Public Outreach: The Planning Committee, composed of representatives of all participating local government(s), began the process by advertising the overall purpose and intent of a hazard mitigation plan, and the goals/outcomes of the proposed update, to the public through numerous social media posts (i.e. Facebook, Twitter, Local Government websites, etc.) and press releases.

A central project information website was created providing:

- The rationale/need for hazard mitigation planning;
- Historical information on past planning efforts;
- A synopsis of the findings/recommendations of the adopted Eno-Haw Regional Hazard Mitigation Plan;
- A breakdown of current 'issues' needing to be addressed; and
- A bi-weekly update on the preparation of the 2020 plan update/adoption.

The Committee held two open public meetings to solicit input and provided a web-based public participation survey.

Updates on the Plan's development were posted to the website and made available through various social media posts (i.e. Facebook and Twitter).

- b. Risk Assessment: Committee members, along with local government staff, evaluated each identified hazard's potential impacts on the people, economy, and built and natural environments in the planning area. This assessment included developing an understanding of each participating jurisdiction's overall vulnerability and most significant risks.

These potential impacts, and a thorough understanding of the overall vulnerability of the regions covered by the Plan, were used to create problem statements and identify and prioritize mitigation actions to reduce risk.

- c. **Capability Assessment:** Each participating jurisdiction completed a capability assessment (i.e. a review of germane authorities, policies, programs, staff, funding, etc.) available to accomplish mitigation and reduce long-term vulnerability.

Results of this analysis were conveyed to the Planning Committee to identify capabilities that currently reduce disaster losses or could be used to reduce losses in the future.

- d. **Mitigation Strategy Development:** Through this process, the Planning Committee identified various policies, actions, and activities designed to reduce the impact future natural hazard occurrences will have on people and property in the planning area. This component of the process including identification of long-range mitigation goals common to the planning area and short-term mitigation actions specific to each participating jurisdiction.
- e. **Plan Maintenance:** As the project neared completion, the Planning Committee established a process to monitor/track plan implementation measuring additional opportunities and constraints. These procedures were designed to ensure mitigation strategies are implemented according to the plan as well as to provide:
- The foundation for ongoing mitigation program(s),
 - Standardize long-term monitoring of hazard-related activities,
 - Integrate mitigation principles into local officials' daily job responsibilities, and
 - Maintain momentum through continued engagement and accountability in the plan's progress.

This will also aid in updating the plan every five years.

- f. **Plan Adoption:** Each participating local government adopted the 2020 Eno-Haw Regional Hazard Mitigation Plan. Orange County's resolution of approval and minutes are attached.

3. Provide a description of the implementation of each recommendation or action item in the action plan or area analysis report, including a statement on how the project was implemented or not implemented during the previous year:

Orange County staff has begun a comprehensive review of existing land use regulations to identify opportunities to modify regulation(s) addressing the goals/policies identified within the adopted 2020 Eno-Haw Regional Hazard Mitigation Plan.

4. Discuss why any objectives were not reached or why implementation is behind schedule:

- a. As reported in our 2013 CRS report, 2016 audit, and 2021 audit, the County is still awaiting changes/updates in State law to adopt/enforce nutrient regulations in the Jordan Lake River basin;
- b. Staff is completing a report outlining costs associated with increasing stormwater design mandates for residential and non-residential development. Staff has been tasked with identifying how 'increasing the design storm event standard' may impact development of affordable housing projects;
- c. With the plan now adopted, staff will continue to identify areas of additional outreach to encourage/promote general public cooperation with hazard mitigation efforts. Plan(s) for open house community education meetings were put on-hold due to the pandemic.

5. What are the recommendations for new projects or revised recommendations?

- a. Continue to coordinate expansion of telecommunication access to local emergency responders. Staff is reviewing several new telecommunication tower applications where the building has agreed to reserve antenna space to local public safety agencies;
- b. Continue enforcement of existing local stormwater management standards and lobby for finalization of State rules on implementation of Jordan Lake nutrient standards;
- c. Complete work on report on potential modification of stormwater design standards to address concerns over increasing runoff due to climate change;
- d. Complete comprehensive review of existing land use regulations to identify opportunities/constraints to implementation of hazard mitigation policies;
- e. Continue joint planning efforts with local municipal partners.

Activity 520

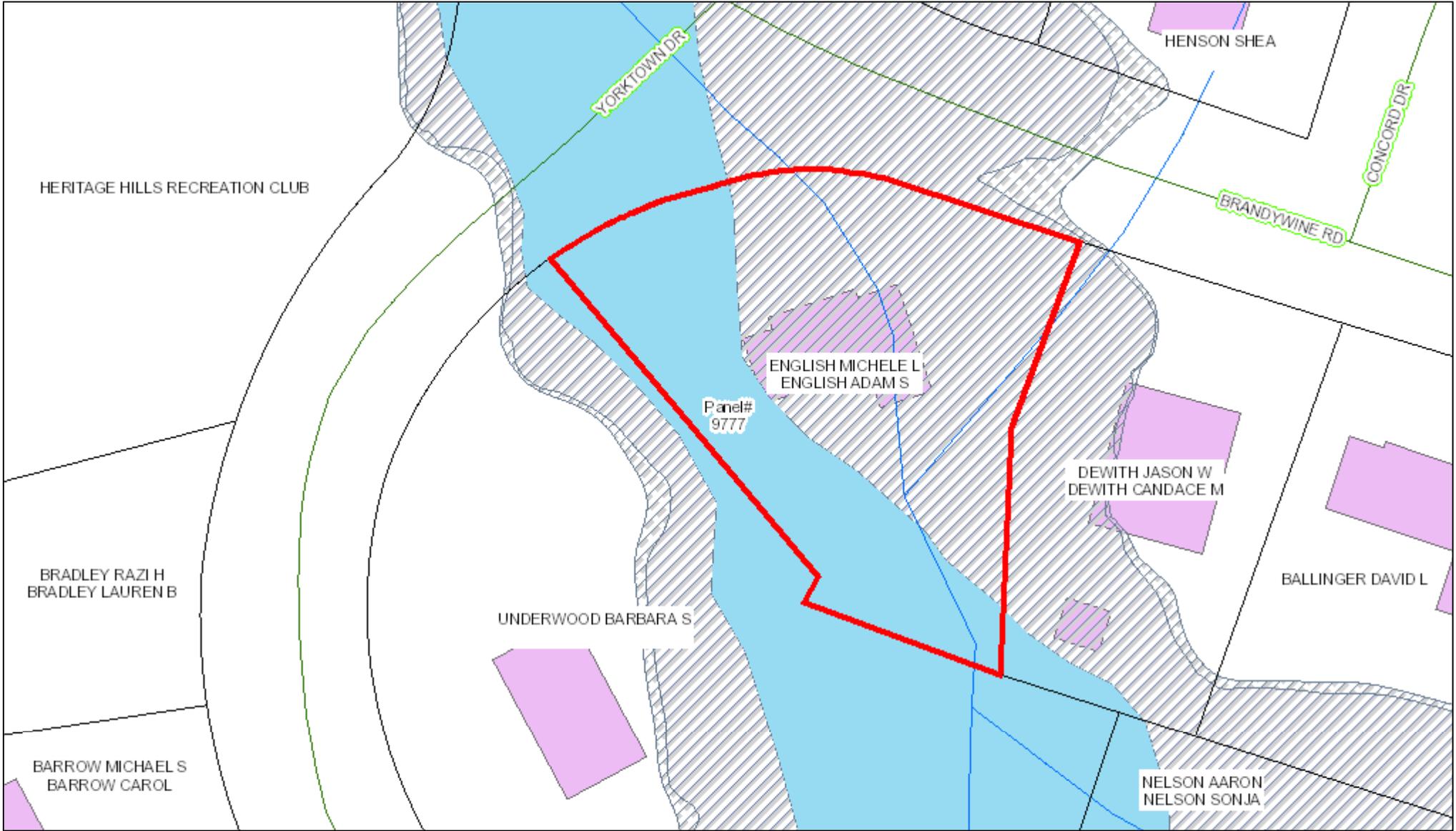
ORANGE COUNTY, NORTH CAROLINA
COMMUNITY RATING SYSTEM (CRS) RECERTIFICATION – AUGUST 2022
ACTIVITY 520 – ACQUISITION AND RELOCATION:

Orange County continues to maintain, as open space, lots where buildings were acquired or relocated outside of the floodplain.

The County has not acquired or relocated any structures since the last CRS Audit (2021), but is working proactively with one particular property owner located at 503 Brandywine Road in Chapel Hill, North Carolina, who experienced repeated flooding during two storm events in 2018 and 2019. Orange County is moving forward with purchasing their property and subsequently removing the existing building as part of our floodplain management program. The completion timeline for this work is anticipated to be prior to the end of the FY22-23 fiscal year.

Staff has attached an informational packet outlining this effort for 503 Brandywine Road, as well as the abstract and approved meeting minutes from the October 15, 2019 BOCC meeting at which this property acquisition was unanimously approved.

Orange County



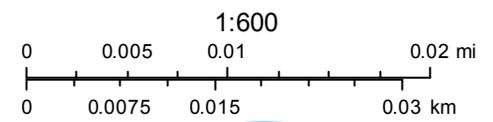
January 16, 2019 This map contains parcels prepared for the inventory of real property within Orange County, and is compiled from recorded deed, plats, and other public records and data. Users of this map are hereby notified that the aforementioned public primary information sources should be consulted for verification of the information contained on this map.

The county and its mapping companies assume no legal responsibility for the information on this map.

PIN: 9777206348
 OWNER 1: ENGLISH MICHELE L
 OWNER 2: ENGLISH ADAM S
 ADDRESS 1: 503 BRANDYWINE RD
 ADDRESS 2:
 CITY: Chapel Hill
 STATE, ZIP: NC 27514
 LEGAL DESC: P/O 11 & 12 BL O SEC 3 HERITAGE HILLS P15/179

SIZE: 0.49 A
 DEED REF: 5616/500
 RATECODE: 04
 TOWNSHIP: CHAPEL HILL
 BLDG SQFT: 1888
 YEAR BUILT: 1971

BUILDING COUNT: 1
 LAND VALUE: \$100,000
 BLDG_VALUE: \$145,100
 USE_VALUE: \$
 TOTAL VALUE: \$245,100
 DATE SOLD: 05/29/2013
 TAX STAMPS: 400



Unofficial Property Record Card - Orange County, NC

General Property Data

Parcel ID **977206348**
 Property Owner **ENGLISH MICHELE L**
ENGLISH ADAM S
 Mailing Address **503 BRANDYWINE RD**
 City **CHAPEL HILL**
 State **NC**
 Zipcode **27514**

Property Location **503 BRANDYWINE RD**
 Property Use **RES**
 Most Recent Sale Date **5/30/2013**
 Legal Reference **5616/500**
 Grantor **HUDSON**
 Sale Price **200,000**
 Land Area **0.49 AC**

Current Property Assessment

Card 1 Value Building Value **145,100** Other Features Value **0** Land Value **100,000** Total Value **245,100**

Building Description

Building Style **Single Fam**
 # of Living Units **1**
 Year Built **1971**
 Finished Area (SF) **1888**
 Full Baths **2**
 # of Other Fixtures **0**

Foundation Type **Masonry**
 Roof Structure **Gable**
 Roof Cover **Shingle**
 Siding **Frame**
 1/2 Baths **1**

Heating Type **Combo H&A**
 Heating Fuel **N/A**
 Air Conditioning **100%**
 # of Bsmt Garages **0**
 3/4 Baths **0**

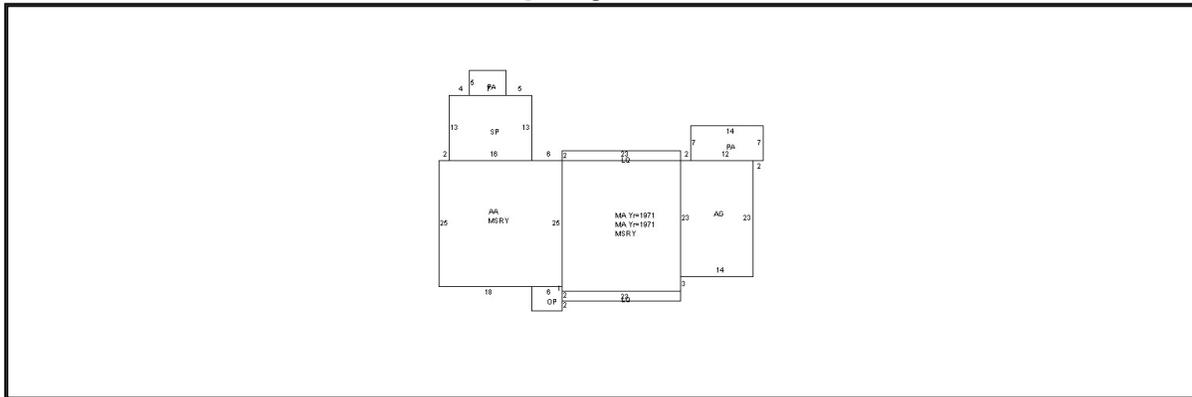
Legal Description

P/O 11 & 12 BL O SEC 3 HERITAGE HILLS P15/179

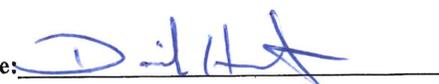
Narrative Description of Property

This property contains 0.49 AC of land mainly classified as RES with a(n) Single Fam style building, built about 1971 , having a finished area of 1888 square feet, with Frame exterior and Shingle roof cover, with 1 unit(s).

Property Sketch



Disclaimer: This information is believed to be correct but is subject to change and is not warranted.

RESOLUTION DESIGNATION OF APPLICANT'S AGENT North Carolina Division of Emergency Management	
Organization Name (hereafter named Organization) Orange County, NC	Disaster Number: FEMA-4393DR-NC
Applicant's State Cognizant Agency for Single Audit purposes (If Cognizant Agency is not assigned, please indicate):	
Applicant's Fiscal Year (FY) Start Month: July Day: 01	
Applicant's Federal Employer's Identification Number 56 - 6000327	
Applicant's Federal Information Processing Standards (FIPS) Number 037 - 135 -	
PRIMARY AGENT	SECONDARY AGENT
Agent's Name Kirby Saunders	Agent's Name Michael Harvey
Organization Orange County	Organization Orange County
Official Position Emergency Management Coordinator	Official Position Flood Plain Manager
Mailing Address PO Box 8181 <input type="checkbox"/>	Mailing Address PO Box 8181 <input type="checkbox"/>
City, State, Zip Hillsborough, NC, 27278	City, State, Zip Hillsborough, NC, 27278
Daytime Telephone (919) 245-6135	Daytime Telephone (919) 245-2597
Facsimile Number	Facsimile Number
Pager or Cellular Number	Pager or Cellular Number
<p>BE IT RESOLVED BY the governing body of the Organization (a public entity duly organized under the laws of the State of North Carolina) that the above-named Primary and Secondary Agents are hereby authorized to execute and file applications for federal and/or state assistance on behalf of the Organization for the purpose of obtaining certain state and federal financial assistance under the Robert T. Stafford Disaster Relief & Emergency Assistance Act, (Public Law 93-288 as amended) or as otherwise available. BE IT FURTHER RESOLVED that the above-named agents are authorized to represent and act for the Organization in all dealings with the State of North Carolina and the Federal Emergency Management Agency for all matters pertaining to such disaster assistance required by the grant agreements and the assurances printed on the reverse side hereof. BE IT FINALLY RESOLVED THAT the above-named agents are authorized to act severally. PASSED AND APPROVED this _____ day of _____, 20____.</p>	
GOVERNING BODY	CERTIFYING OFFICIAL
Name and Title	Name Donna Baker <i>David Hunt</i>
Name and Title	Official Position <i>Deputy</i> Clerk to the Board
Name and Title	Daytime Telephone (919) 245-2130
CERTIFICATION	
I, Donna Baker <i>David Hunt</i> , (Name) duly appointed and <i>Deputy</i> Clerk to the Board (Title) of the Governing Body, do hereby certify that the above is a true and correct copy of a resolution passed and approved by the Governing Body of <u>Orange County Board of Commissioners</u> (Organization) on the <u>15th</u> day of <u>October</u> , 20 <u>19</u> .	
Date: <u>10/16/2019</u>	Signature: 

Hurricane Florence 2018

Orange County , 9/11/2018

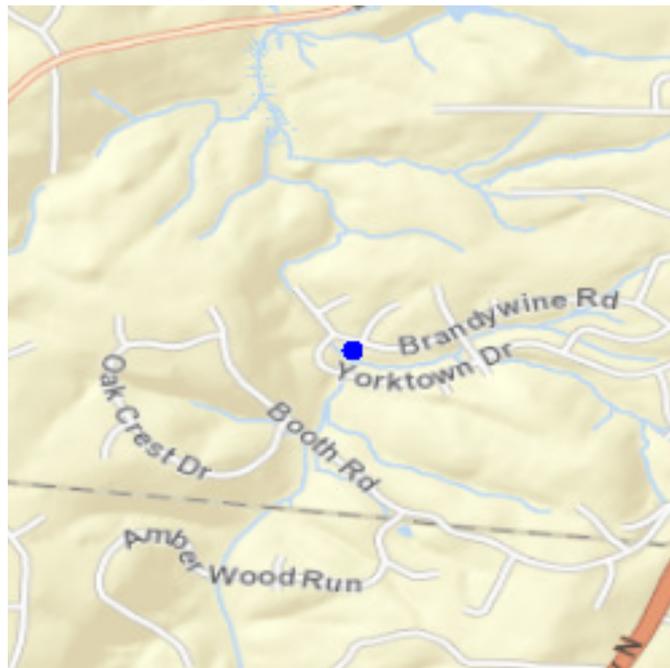
Citizen Request

503 BRANDYWINE ROAD, CHAPEL HILL

Latitude: 35.867039177332934

Longitude: -79.09229985443471

USNG: 17SPV7223470881



Damage Report Type: resident

Address: 503 BRANDYWINE ROAD,
CHAPEL HILL

Nearest Cross Street:

Building Value: 0.0

City:

Zip Code: 27516

Describe Damage: Flood waters surrounded our home and garage and also filled the lower level of our home and garage with about a foot and a half of flood water. The entire downstairs level of our home and our garage is destroyed and all of the things in it.

Homeowner Insurance: Yes

Is a Business: No

Business Name:

First Name: Michele

Last Name: English

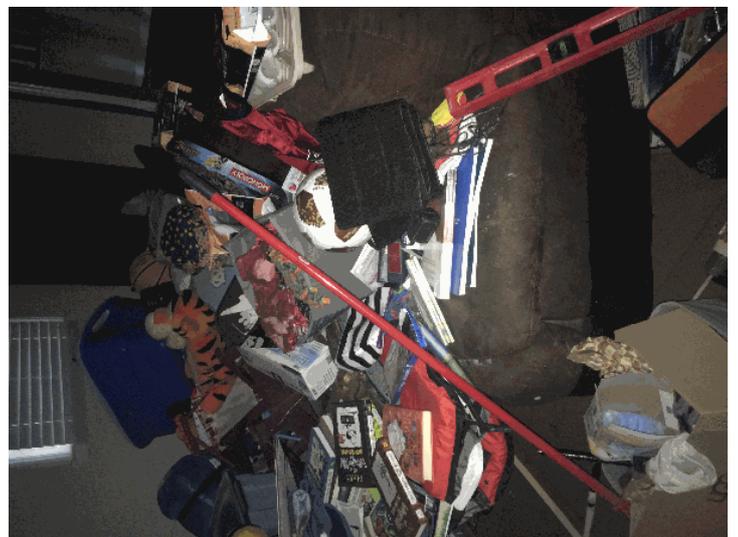
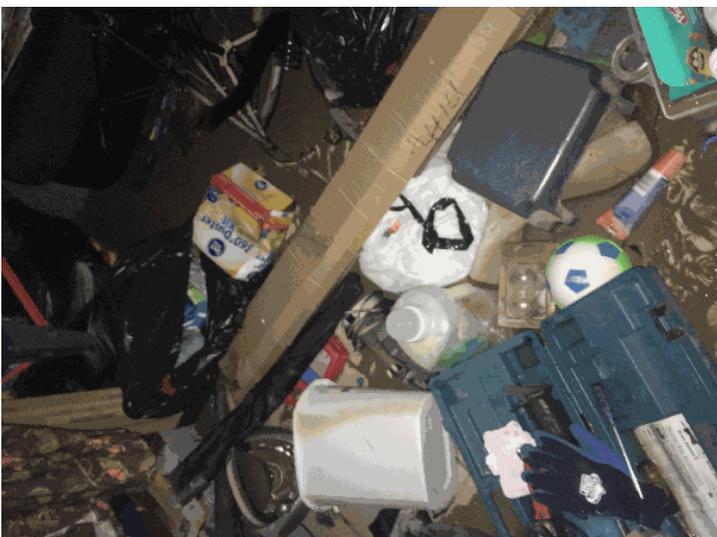
Phone Number: (919) 219-4575

Email: michele@maitlandlaw.com

Notes: Spoke with Michelle, they are interested in a potential buyout option. WKS 9/26/2018

Hurricane Florence 2018

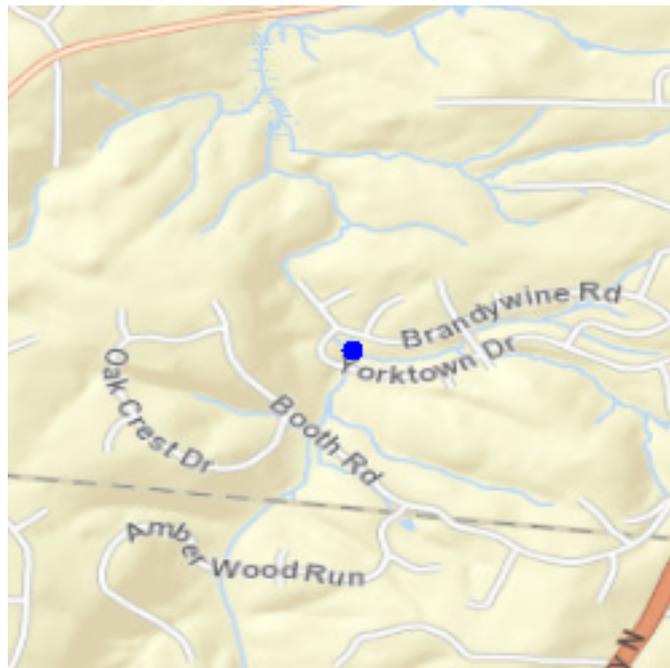
Orange County , 9/11/2018



Hurricane Florence 2018
Orange County , 9/11/2018

Residential

MICHELE L ENGLISH & ADAM S ENGLISH
503 BRANDYWINE RD
Chapel Hill, NC 27516
Latitude: 35.866842855191464
Longitude: -79.09237979434982
USNG: 17SPV7222770859



Name: MICHELE L ENGLISH & ADAM S
ENGLISH

Address: 503 BRANDYWINE RD

City: Chapel Hill

State: NC

Zip Code: 27516

Phone Number:

Structure Value: 145100.0

Occupancy: Owned

Residence Type: sf

Private Road: No

Low Income: Unknown

Name:

Contact Phone Number:

Notes:

Current Use: Occupied

Damage: Major

Damage Amount: 87060.0

Safety Factor: Unsafe

Unsafe Notes:

Insured: Unknown

Flood Height (ft): 0.0

Primary: Unknown

Inaccessible: No

Utilities: Unknown

Completed By:

Individual:

Actions Taken:

**ORANGE COUNTY
BOARD OF COMMISSIONERS**

ACTION AGENDA ITEM ABSTRACT

Meeting Date: October 15, 2019

**Action Agenda
Item No. 6-a**

SUBJECT: Designation of an Agent to Administer Orange County's Application to FEMA's Hazard Mitigation Grant Program

DEPARTMENT: Emergency Services and Planning and Inspections

ATTACHMENT(S):

Resolution - Designation of Applicant's Agent
Brandywine Property Map
Request Letter from UNC Chapel Hill

INFORMATION CONTACT:

Kirby Saunders, 919-245-6135
Dinah Jeffries, 919-245-6100
Michael Harvey, 919-245-2597
Craig Benedict, 919-245-2592

PURPOSE: To designate an agent for Orange County's application to the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grants Program for repetitive loss property acquisition and to serve as a sub-applicant for the University of Chapel Hill to fund the installation of a generator for its Emergency Operation Center.

BACKGROUND: During September 14th through 17th, 2018 Orange County was significantly impacted by torrential rain and winds due to Hurricane Florence. As a result, significant flooding occurred over the course of several days, and Orange County was included in the list of counties that received a major disaster declaration from FEMA on October 22, 2018. (Disaster number: 4393-DR-NC). Orange County is submitting a grant request for the two projects outlined below:

Project #1

Despite emergency protective measures that were taken by the County, several residential properties were flooded during Hurricane Florence due to heavy and cumulative rainfall. One of these properties, 503 Brandywine Road (PIN 9777-20-6348) within the Chapel Hill Township, sustained significant damage. Flood waters effectively destroyed the first level of the home and all of its contents. Staff completed a damage assessment of the property and concluded that the property sustained approximately \$87,000 in damage.

The property was developed sometime in 1971 before the County adopted comprehensive floodplain mitigation standards, and it is located within an identified floodplain. This property is considered to be at 'high risk' for flooding, as defined by FEMA.

Over the past 10 years, this property has suffered repetitive losses due to heavy rains and flooding. Both the Planning and Inspections Department and Emergency Services Department have coordinated efforts during this time period to secure the necessary funding to purchase the property and remove the existing residence. Based on its flooding history, the property officially constitutes a potential public safety hazard, but staff had been unable to sufficiently justify requests for acquisition and removal due to a lack of significant damage. However, as a result of the flooding that occurred during Hurricane Florence, staff can designate the property as being 'substantially damaged', consistent with the provisions of the Unified Development Ordinance (UDO) and are able to justify a grant request for acquisition. Once the County receives the grant funds, the County will acquire the property, contract for the deconstruction of the house, and restore the property to green space.

Project #2

Orange County has received a request from the University of North Carolina at Chapel Hill to serve as the sub-applicant for an emergency generator project on the University's behalf. UNC Chapel Hill is seeking grant funding to install an emergency generator to support its environmental health and safety facility on Estes Drive Extension which serves as the campus Emergency Operations Center. The total of this grant request is approximately \$414,000. A letter of request from UNC Chapel Hill is attached.

As a part of the process, the County must adopt a resolution designating an agent to apply for and receive project assistance from FEMA's Hazard Mitigation Grants Program.

FINANCIAL IMPACT: FEMA provides Hazard Mitigation Grants Program funding up to 75% of total project costs, and North Carolina Emergency Management has historically provided the 25% local share for counties, resulting in no direct financial impact to the County.

Project # 1 (Acquisition - 503 Brandywine Rd) – The current estimated cost of the property acquisition project is \$322,150 with \$242,612.50 being paid by FEMA and the remaining \$80,537.50 being paid by the State of North Carolina.

Project # 2 (UNC Chapel Hill Generator – EHS Facility) – UNC Chapel Hill has submitted an initial budget amount of \$414,217 with \$310,662.75 being paid by FEMA and the remaining \$103,554.25 being paid by the State of North Carolina. Orange County will enter into a Memorandum of Agreement to serve as the fiscal agent on behalf of the University, and Orange County will retain any reimbursements for management costs associated with this project (estimated to be 5% of the overall project total or approximately \$20,700).

SOCIAL JUSTICE IMPACT: The following Orange County Social Justice Goals are applicable to this item:

- **GOAL: CREATE A SAFE COMMUNITY**
The reduction of risks from vehicle/traffic accidents, childhood and senior injuries, gang activity, substance abuse and domestic violence.
- **GOAL: ESTABLISH SUSTAINABLE AND EQUITABLE LAND-USE AND ENVIRONMENTAL POLICIES**
The fair treatment and meaningful involvement of people of all races, cultures, incomes and educational levels with respect to the development and enforcement of environmental laws, regulations, policies, and decisions. Fair treatment means that no group of people should bear a disproportionate share of the negative environmental

consequences resulting from industrial, governmental and commercial operations or policies.

Project # 1 (Acquisition - 503 Brandywine Rd) has a positive social justice impact by relocating a family of five including three small children (a vulnerable population) from a hazard prone area. The FEMA Hazard Mitigation Grant Program provides temporary assistance to those displaced by this mitigation action. The owners of this property are voluntarily committing to the acquisition process, as required by federal law. Further, the removal of this house from the floodplain and returning the property to open space helps to reduce flood levels in the area and protects adjacent property owners from debris during a storm event.

Project # 2 (UNC Chapel Hill Generator – EHS Facility) will help to ensure continuity of UNC Chapel Hill's ability to maintain emergency coordination and support of the campus community (including students, staff, and visitors).

ENVIRONMENTAL IMPACT: The following Orange County Environmental Responsibility Goal impacts are applicable to this item:

- **RESULTANT IMPACT ON NATURAL RESOURCES AND AIR QUALITY**

Assess and where possible mitigate adverse impacts created to the natural resources of the site and adjoining area. Minimize production of greenhouse gases.

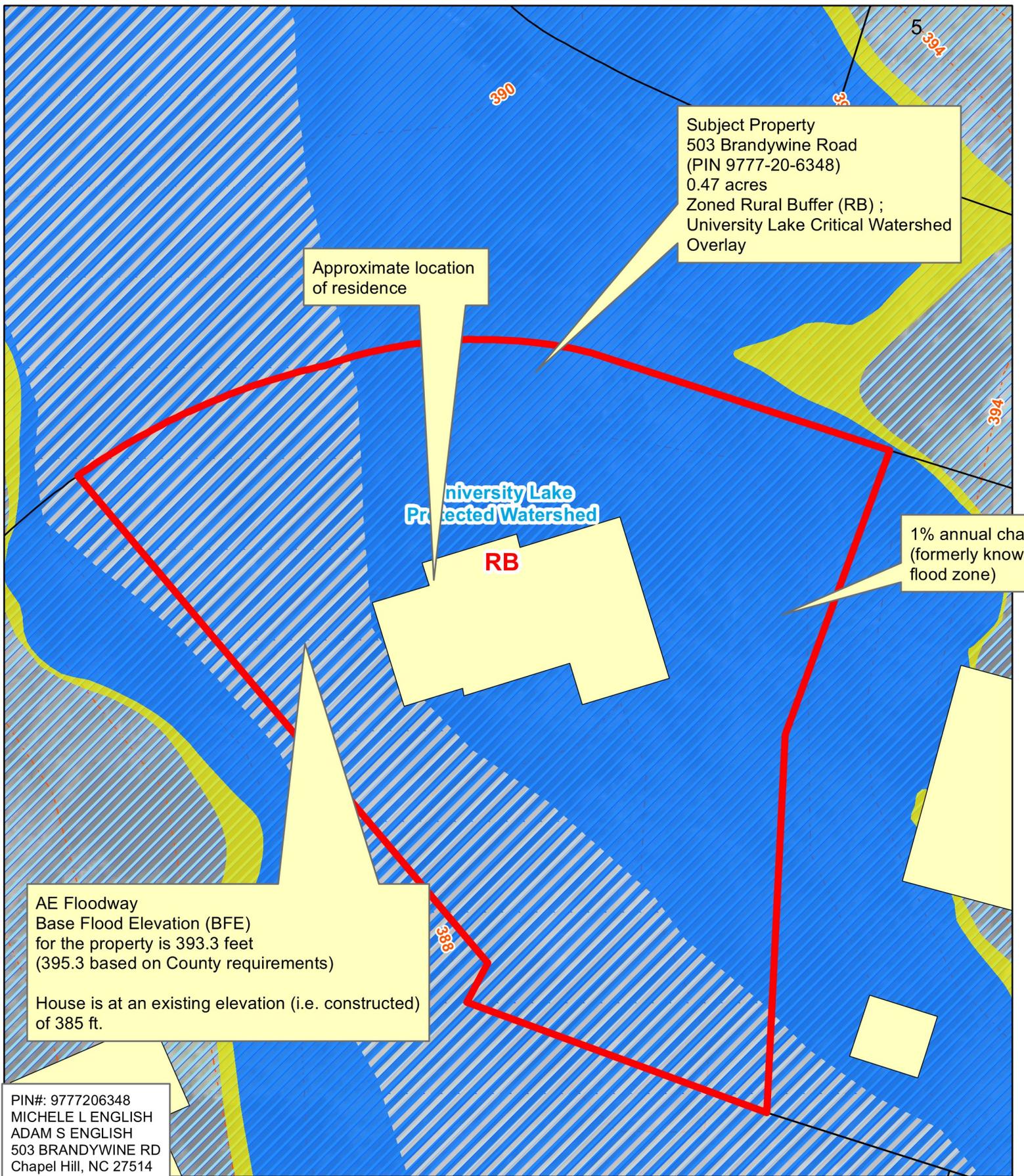
The 503 Brandywine Road property will be deconstructed and returned to green/natural space under a 100 year deed restriction. All aspects of both projects; including but not limited to debris removal, will follow all federal, state, and local environmental and historic regulations. The target acquisition property is not identified as a historic property.

The installation of the generator at UNC will involve unearthing a section of land and installing concrete, wiring, and associated equipment. This project will also follow all local, state, and federal regulations regarding environmental and historic regulations. Due to the size of facility, the generator being installed will be fueled by diesel. Currently, this equipment is the most efficient, cost effective, and least obstructive.

RECOMMENDATION(S): The Manager recommends that the Board:

- 1) approve the attached resolution designating Kirby Saunders as the County's Primary Agent and Michael Harvey as the Secondary Agent for this Hazard Mitigation Grant Program application;
- 2) direct the Clerk of the Board of County Commissioners to sign as the Certifying Official;
- 3) authorize the designated agent to submit the Hazard Mitigation Grant Project application to North Carolina Emergency Management for approval; and
- 4) authorize the Manager to execute and sign all necessary documents in support of this grant opportunity.

RESOLUTION	
DESIGNATION OF APPLICANT'S AGENT	
North Carolina Division of Emergency Management	
Organization Name (hereafter named Organization) Orange County, NC	Disaster Number: FEMA-4393DR-NC
Applicant's State Cognizant Agency for Single Audit purposes (If Cognizant Agency is not assigned, please indicate):	
Applicant's Fiscal Year (FY) Start Month: July Day: 01	
Applicant's Federal Employer's Identification Number 56 - 6000327	
Applicant's Federal Information Processing Standards (FIPS) Number 037 - 135 -	
PRIMARY AGENT	SECONDARY AGENT
Agent's Name Kirby Saunders	Agent's Name Michael Harvey
Organization Orange County	Organization Orange County
Official Position Emergency Management Coordinator	Official Position Flood Plain Manager
Mailing Address PO Box 8181	Mailing Address PO Box 8181
City, State, Zip Hillsborough, NC, 27278	City, State, Zip Hillsborough, NC, 27278
Daytime Telephone (919) 245-6135	Daytime Telephone (919) 245-2597
Facsimile Number	Facsimile Number
Pager or Cellular Number	Pager or Cellular Number
<p>BE IT RESOLVED BY the governing body of the Organization (a public entity duly organized under the laws of the State of North Carolina) that the above-named Primary and Secondary Agents are hereby authorized to execute and file applications for federal and/or state assistance on behalf of the Organization for the purpose of obtaining certain state and federal financial assistance under the Robert T. Stafford Disaster Relief & Emergency Assistance Act, (Public Law 93-288 as amended) or as otherwise available. BE IT FURTHER RESOLVED that the above-named agents are authorized to represent and act for the Organization in all dealings with the State of North Carolina and the Federal Emergency Management Agency for all matters pertaining to such disaster assistance required by the grant agreements and the assurances printed on the reverse side hereof. BE IT FINALLY RESOLVED THAT the above-named agents are authorized to act severally. PASSED AND APPROVED this _____ day of _____, 20____.</p>	
GOVERNING BODY	CERTIFYING OFFICIAL
Name and Title	Name Donna Baker
Name and Title	Official Position Clerk to the Board
Name and Title	Daytime Telephone (919) 245-2130
CERTIFICATION	
<p>I, <u>Donna Baker</u>, (Name) duly appointed and <u>Clerk to the Board</u> (Title) of the Governing Body, do hereby certify that the above is a true and correct copy of a resolution passed and approved by the Governing Body of <u>Orange County Board of Commissioners</u> (Organization) on the <u>15th</u> day of <u>October</u>, 20<u>19</u>.</p>	
Date: _____	Signature: _____



Subject Property
 503 Brandywine Road
 (PIN 9777-20-6348)
 0.47 acres
 Zoned Rural Buffer (RB) ;
 University Lake Critical Watershed
 Overlay

Approximate location
 of residence

University Lake
 Protected Watershed

RB

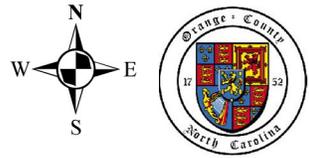
1% annual chance
 (formerly known as
 flood zone)

AE Floodway
 Base Flood Elevation (BFE)
 for the property is 393.3 feet
 (395.3 based on County requirements)

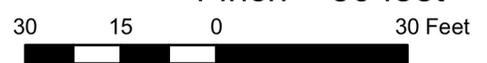
House is at an existing elevation (i.e. constructed)
 of 385 ft.

PIN#: 9777206348
 MICHELE L ENGLISH
 ADAM S ENGLISH
 503 BRANDYWINE RD
 Chapel Hill, NC 27514

- Floodplain Buffer 65ft
- Regulatory floodway
- 1% Annual Chance of Flooding (Previously referred to as the 100-year flood zone)
- 0.2% Annual Chance of Flooding (Previously referred to as the 500-year flood zone)
- Buildings 2008
- 2' Contours (NCDOT)
- Parcels
- Zoning
- Watershed



1 inch = 30 feet



W. Kirby Saunders
Emergency Management Coordinator
Orange County Emergency Services
Hillsborough, NC

Mr. Saunders,

In reference to FEMA's Hazard Mitigation Grant Program "Generator Procurement" funding opportunity through the North Carolina Division of Emergency Management for Disaster Number 4393-DR, The University of North Carolina at Chapel Hill's (UNC) Office of Emergency Management and Planning is requesting Orange County, NC serve as Sub-applicant for said grant for the purchase and installation of a new generator at the Emergency Operations Center on our Main Campus in Chapel Hill (1120 Estes Drive Extension). This facility has and continues to serve as a critical coordination venue for campus, local, and county level incidents and events. Therefore, it is essential that emergency power is preserved during an outage.

Attached are reference documents that detail the project's scope.

Thank you for considering this request, and I look forward to your reply.

Sincerely,



Darrell H. Jeter

Director of Emergency Management & Planning

cc. Derek Kemp, AVC for Campus Safety & Risk Management

APPROVED 11/7/2019

**MINUTES
BOARD OF COMMISSIONERS
REGULAR MEETING
October 15, 2019
7:00 p.m.**

The Orange County Board of Commissioners met in regular session on Tuesday, October 15, 2019 at 7:00 p.m. at the Southern Human Services Center in Chapel Hill, N.C.

COUNTY COMMISSIONERS PRESENT: Chair Penny Rich and Commissioners Jamezetta Bedford, Mark Dorosin, Sally Greene, Earl McKee, Mark Marcoplos, and Renee Price

COUNTY COMMISSIONERS ABSENT: None

COUNTY ATTORNEYS PRESENT: John Roberts

COUNTY STAFF PRESENT: County Manager Bonnie Hammersley, Deputy County Manager Travis Myren, and Deputy Clerk Sherri Ingersoll (All other staff members will be identified appropriately below.)

Chair Rich called the meeting to order at 7:00 p.m.

1. Additions or Changes to the Agenda

Handouts:

- 6-a PowerPoint – Hurricane Florence Hazard Mitigation Program
- 6-a Handout – Eno-Haw Regional Hazard Mitigation Plan
- 6-a Handout – Eno-Haw Regional Hazard Mitigation Plan Public Survey

PUBLIC CHARGE

Chair Rich acknowledged the public charge.

Arts Moment

Katie Murray, Arts Commission Coordinator, introduced the artist: Peter Guzzardi has worked in publishing for more than forty years. Prominent books he has edited include Stephen Hawking's A Brief History of Time, Deepak Chopra's Ageless Body, Timeless Mind, Queen Noor's Leap of Faith, Arianna Huffington's Fanatics and Fools, and Paula Poundstone's There's Nothing in This Book That I Meant to Say. Emeralds of Oz: Life Lessons from Over the Rainbow was published by HarperCollins in May 2019 and marks Peter's debut as an author. An independent editor and writer, he has lived in Chapel Hill for the past 20-plus years.

Peter Guzzardi read from the chapter, "Ninth Emerald: There's No Place Like Home" from his book.

2. Public Comments (Limited to One Hour)

a. Matters not on the Printed Agenda

Laura Cotterman said she has been very impressed with the Commissioners' efforts with the task of averting climate congestion. She said time is of the essence, and asked if the Board of County Commissioners (BOCC) would look into the investment portfolio of the County employee's retirement plan with regard to oil, gas and coal investments, as well as other County investments, and request the State Treasurer to remove these funds immediately. She said oil, gas and coal companies are resisting this divestment, but doing so

is a powerful tool. She said 14% of funds in these investments that have been divested already are in pension plans and other retirement plans. She said she receives a pension from the State. She encouraged the Board to pursue this, and inspire others to do the same.

Chair Rich said this would be taken up as a petition.

Riley Ruske said he presented a letter to the Board of County Commissioners and a petition on September 3, regarding reciting the Pledge of Allegiance. He said he recently received a letter from the Board Chair with a response, but some items have not been discussed. He said this letter is an inadequate response, as it does not address all of the points in the petition, and he considers this letter as a non-response to the petition. He said he is resubmitting this petition, and expects the Board to publicly discuss and vote on it. He said the public has a right to know how each member feels about reciting the pledge, and the social justice and inclusiveness impacts of doing so.

b. Matters on the Printed Agenda

(These matters will be considered when the Board addresses that item on the agenda below.)

3. Announcements, Petitions and Comments by Board Members

Commissioner McKee said he had no comments.

Commissioner Greene said she had no comments.

Commissioner Marcoplos said he had no comments.

Commissioner Price said she attended the Triangle J Council of Governments' Summit where keynote speaker Michael Goodman, gave a wonderful presentation about "Assistance Approach". She said she sat in on a workshop relating to a regional approach to housing, where one of the panelists was from the County's Department on Aging. She said this staff member is creating a database on housing needs. She said she also attended a workshop on financing local resilience strategies. She said no additional workshops are planned at this time, due to a lack of funding.

Commissioner Price said she has attended the collaboration meetings with the municipalities. She said in the Chapel Hill meeting, the group discussed looking at the environmental study. She said all involved want to place emphasis on this, including some neighbors to the Greene Tract, with whom she spoke.

Commissioner Price said the Board received a letter from the Northern Orange MLK, Jr. commemorative committee, regarding the 25th year of their hosting events. She asked if the Board could respond to this letter.

Commissioner Bedford said she had no comments.

Commissioner Dorosin said he received an email on September 22 about sidewalks around Hillsborough and Orange County schools, and the need for walkable ways to get to school. He said there was also a March email from the Manager that said the issue would be addressed with staff, but nothing seems to be getting done. He said he would like to see a more aggressive plan. He said the Board is not in the business of sidewalks, but it is in the business of public safety and environmental justice, and he would like to see this issue back at the top of the Board's agenda to see what it can do to incentivize walking paths.

Chair Rich said the Chair and Vice Chair just had conversation about this with Hillsborough, and there is money in the budget to do a study. She said this is a priority issue.

Bonnie Hammersley said money was budgeted for a study in order to determine if a bike-ped path or walking paths would be better. She said this study and research will be done in advance of the budget, and staff will meet with the partners to see how to move forward, once the study is completed.

Commissioner Dorosin said the schools need to be involved. He said school safety is important, and getting to and from school is a critical issue. He asked if this could be added to a school collaboration meeting agenda.

Chair Rich said the school collaboration team is meeting on Friday, and there has been some confusion about these meetings. She said a facilitator is needed for these meetings, and one has recently been found. She said the Clerk's office is working on some dates in January or February for the School Boards to meet, and this will be a topic of discussion.

Chair Rich said that Commissioner Dorosin talked at a recent meeting about universal pre-K, and made a petition to look into it. She said there is some information already gathered, and staff is continuing to research this idea.

Chair Rich said that the Latina Center opened on UNC campus on October 4, which is exciting. She said she went to an Ambassador Program meeting at the School of Government, and applications to this program are available. She said they talked about having civil conversations for four hours, including some conversation about charter schools, with 95% of the room being on the same page about charter schools.

Chair Rich said she is making a petition to review taking Board meetings on the road. She said smaller counties are doing this once or twice a year, and she would like to see how difficult this would be for the BOCC to do. She said the meetings could not be broadcast, but others have used Facebook Live or other ways to capture the meeting. She asked staff if this is logistically possible to try in the northern and western parts of the County.

Chair Rich said Durham Councilwoman Javiera Caballero has been getting criticism as being a non-legitimate person, which is untrue, and offered the Board's support of her.

4. Proclamations/ Resolutions/ Special Presentations

a. Recognition of Cedar Ridge High School Students for Video Presented at the United Nations

BACKGROUND: Digital Promise Global, the United Nations SDG Action Campaign, and Oculus launched MY World 360°, supporting youth worldwide to create 360° media as a way to share their perspectives and advance positive action toward the 17 Sustainable Development Goals (SDGs) adopted by the United Nations in September 2015.

The program aims to drive youth engagement and agency, improve youth understanding about global issues impacting communities around the world, build young people's technical production skills with new media, and spur public awareness and action.

Students, under the direction of Cedar Ridge Videography Instructor Andrea DeGette, wrote, produced and edited a short film titled, "Around the Same Table." Students from 24 nations submitted 76 videos to MY World 360°. Nine were chosen to be screened at the summit. Degette applied for an equipment grant through Digital Promise Global and Oculus in spring 2019.

Justus Alder, who graduated from Cedar Ridge in 2019, filmed and edited "Around the Same Table." Former Cedar Ridge student Alexis Barnes, a graduate from UNC's Hussman School of Journalism and Media, taught students how to use the 360 virtual reality equipment. Alder and Cedar Ridge senior Charles Bunker were featured in the video.

Todd McGee, Community Relations Director, introduced Andrea DeGette. He said this was an international competition at the UN with 76 entrants from 24 countries, and Cedar Ridge was one of nine to be chosen at the summit.

Andrea DeGette introduced her student, Justus Alder, and thanked the Board for showing the film tonight. She said they acquired an equipment grant to make a film about local farming, and how it brings various parts of the community together around the issue of sustainability. She said her students Justus Alder and Charles Bunker work in farming, and came together to create this project. She said Justus Alder received an all-expenses paid trip to the United Nations to represent Cedar Ridge's videography program.

Justus Alder said Orange County is a great place that is big on sustainable farming. He said he hopes people will continue to work together on this issue.

A member of the public asked how they distribute food to those who need it.

Justus Alder said they have a partnership with the Methodist Church in Cedar Grove, and also drive it door-to-door to meet needs.

Chair Rich said this was an awesome presentation, and it is evident how much effort was put into making this work. She thanked Justus Alder for all that he does, and congratulated him on his accomplishments.

b. Orange County Arts Commission 2019-20 Grant Recipients

The Board presented grant checks to local artists and arts organizations receiving 2019-20 Orange County Arts Grants.

BACKGROUND: The Orange County Arts Commission (OCAC) awards grants to local artists, schools and nonprofit organizations from funds received from the state and Orange County government for this purpose. These funds are distributed for arts projects and programs in all arts disciplines.

TOTALS	FY17-18	FY18-19	FY19-20
NC Arts Council Funding	\$36,913	\$40,594	\$36,703
Orange County Funding	\$28,800	\$28,800	\$28,800
TOTAL AVAILABLE FUNDING	\$65,713	\$69,394	\$65,503
Total dollar amount requests	\$162,334	\$163,859	\$187,560
Total grants awarded	33, or 60% of requests	38, or 57% of requests	43, or 53% of requests
Total applications received	55	67	80
Total first-time applicants	18, or 38% of applicants	29, or 47% of applicants	30, or 38% of applicants
First-time applicants awarded	8, or 17% of awards	12, or 32% of awards	10, or 23% of awards

The OCAC grant review and awards process is as follows:

1. The grant application process is open for two full months. During these two months, three training sessions are hosted throughout the County and the OCAC Director is available for one-on-one meetings. An "early review" deadline is offered one week ahead of the due date, allowing applicants to have staff review applications and receive feedback.
2. After the due date, the OCAC Director conducts an initial compliance review. Applications are checked for insufficient/missing financial documents, missing work samples, and completion of the correct type of application (for example, organizations must submit a Grassroots Arts Program Grant and cannot submit Artist Project Grant applications). Applications found noncompliant are considered disqualified.
3. Qualified applications are forwarded to members of each review panel for initial review and scoring:
 - a. Visual Arts: Composed of OCAC Board Members with visual arts expertise, as well as one visual arts professional from the community.

- b. Performing Arts: Composed of OCAC Board Members with performing arts expertise, as well as one performing arts professional from the community.
 - c. Arts in Education: Composed of OCAC Board Members with public education experience.
4. Non-governmental Grassroots Arts Program (GAP) applicants are also evaluated by a Financial Review Panel that evaluates the organization's submitted financial documents to determine financial solvency and stability. Factors considered include the ratio of administrative or fundraising expense in overall budget, as well as a deficit or surplus without explanation and/or stated plan.
 5. Each panel meets in person to evaluate assigned applications. Feedback, first strengths and then challenges, is offered by panelists and recorded by the Director. After discussion, each panelist submits a score through the online platform for each of the categories below. After all scores are submitted, the director records the final average score per applicant.
 6. The scoring rubric for each grant program is as follows:
 - GRASSROOTS ARTS PROGRAM GRANTS
 - Artistic Merit – 35%
 - Community Impact – 30%
 - Program Management – 15%
 - Financial Review – 10%
 - NC Arts Council Priority of Funding – 10%
 - ARTIST PROJECT GRANTS
 - Artistic Merit – 50%
 - Community Impact – 25%
 - Program Management – 25%
 - ARTS IN EDUCATION GRANTS
 - Artistic Merit – 40%
 - Integration in curriculum and/or enrichment – 40%
 - Need (Free and Reduced Lunch Percentage) – 20%
 7. Funding decisions are made at the next Advisory Board meeting. This year, funds were divided based on the percentage of applicants from each category. Artists represented 41% of applications, organizations 34%, and schools 25%. Therefore, the total of available funding (\$62,058) was divided within those framework percentages.
 8. Within each of the three categories, applicants are funded based on their score, e.g., an application with a score of 73 would receive 73% of their request. If excess funds were available in a category after dispersing funds based on score, they were divided among all recipients in that category.
 9. All applicants are notified of the panel's decisions. All GAP applicants received panel feedback. Artist Project Grant applicants can receive feedback upon request.

Katie Murray said the Arts Commission received 80 grant requests for \$187,560. She said 30 (38%) were first time applicants, and the Commission funded 60% of eligible request this year, and awarded \$28,800 in Orange County funds, and \$31,703 in State Grassroots Arts Program Funds. She said 43 grants were funded, included 10 first time applicants. She said the Commission received more applications from individual artists than organizations, and recipients included 16 artists, 15 non-profit organizations, and 12 schools. She said state grassroots funds and the Piedmont Laureate program usually also support the Commission's funds; the Piedmont Laureate program will not be funded this year, but these funds were funded through the Arts Commissions' general budget. She thanked the BOCC for its ongoing support.

Katie Murray introduced the recipients, and Commissioner Greene presented the checks.

GRASSROOTS ARTS PROGRAM GRANT RECIPIENTS		
ORGANIZATION	PROGRAM	NAME OF REPRESENTATIVE
Ackland Art Museum at the University of North Carolina at Chapel Hill	Two ART& public artist programs by artist collective Intergalactic Soul at the Ackland Art Museum in FY20.	Allison Portnow Lathrop
Carrboro Elementary School	Carrboro Elementary 2019/2020 Cultural Arts Programming	Lynn Weller
Cedar Ridge High School (Orange County Schools)	Hip Hop and Jazz Ensemble Performance at Cultural Explosion	Jason Johnson
Cedar Ridge High School Darkroom Project	Cedar Ridge High School Darkroom Project	Andrea DeGette, Bill Boyarski, Thane Bell
Chapel Hill Philharmonia	Chapel Hill Philharmonia Annual Children's Concert	John Konanc
Chapel Hill-Carrboro Public School Foundation	For Kids By Kids/Mariposas book project	Lynn Lehman, Andrea Tanner
Chapel Hill-Carrboro Public School Foundation	Chapel Hill High School Hip-Hop Team	Lynn Lehman, Andrea Tanner
Chapel Hill-Carrboro Public School Foundation	Scroggs Community Mural Project	Lynn Lehman, Andrea Tanner
Chelsea Theater	Operating Support for the Chelsea Theater	Emily Kass
CW Stanford Drama Club	CWS Drama Club Director funding	Jessie Malloy
East Chapel Hill High School Visual Arts	Artist In Residence: Delores Hayes and Raku Firing at Liberty Arts Studio	Melissa Vrooman Olson
Ephesus Road Elementary School PTA	Cultural Performances at Ephesus Elementary	Sarah Roberts
Estes Hills PTA	Estes Hills Elementary Cultural Enrichment Program 2019-20	Melissa Kushnir, Sarah Brincefield
Guy B Phillips Middle School PTSA	Cultural Enrichment Performances at Phillips Middle School, 2019-2020	Kristen Stewart
Hillsborough Arts Council	Hillsborough's Last Friday Art Walk	Torey Mishoe
Hillsborough Arts Council	Teaching Artists and Performers for the 2019 Solstice Lantern Walk	Torey Mishoe
Hillsborough Arts Council	Salary Support for Hillsborough Arts Council	Tori Mishoe
McDougle Elementary School Parent Teacher Association (MES PTA)	Cultural Performances at McDougle Elementary School	Daniela Miteva
Musical Empowerment	Salary Support for Musical Empowerment	Kelly Downey
New Hope Elementary (Orange	Support for Artist in Residence	Jason Johnson

County Schools)	Program in Title 1 Schools	
North Carolina Arts in Action	Providing life skills through dance, music and performance for underserved students at Rashkis	Disha Dewan
Orange County Artists Guild	Orange County Artists Guild Advertising Outreach	Judith Ernst & Ross Ford
Puppet Show Incorporated	Fabled Puppet Productions	Ronnie Jackson
The Village Band of Chapel Hill and Carrboro	Salary Support for The Village Band	Ed Cox and Sharon Bushnell
University of North Carolina at Chapel Hill/PlayMakers Repertory Company	2019-20 PlayMakers Mobile Touring Program	Amelia Stanley
Voices the Chapel Hill Chorus	Salary Support for Rehearsal and Concert Accompanist	Susan Brunssen
Women's Voices Chorus	Operational Support for Concert	Kay Johnson, Laura Sam
ARTIST PROJECT GRANT RECIPIENTS		
<i>NAME OF ARTIST</i>	<i>PROGRAM</i>	
Bailey, Sean T.	Preparation for Photographic Exhibition // "Belonging"	
Barr, Amanda and George Jenne	My Room at Attic 506	
Britton, Maria (not present)	Artist Residency at Hambidge	
Haggerty, Meredith	The Collage Stop	
Lane, Kim	Homegrown Hillsborough: Diverse Local Voices at Burwell House	
LEVEL retreat (Marie Rossetti/BJ Warshaw)	Visiting Artist: Tod Seelie	
Moore, Andrea Edith (Shannon Healey)	Family Secrets: Kith and Kin Recording	
Nadeau, Emma	Musical Instruments for Educational Theater	
Ramirez, Sol	123 Puppetry Spring 2020 Production	
Slade, Marcela	Funds for material: vintage, silk and cotton to produce new sladesign collection	
Spitzer, Wendy	Musical Performance/Workshop Events at Ronald McDonald House and The Nightlight in Chapel Hill	
Taft, Annie	Suffragette!	
Tyler, Jedd	March 2020 show for Senior HUD housing	
Wagg, Ginger	Creating new sections and producing two public Critical Feedback sessions for Wild Actions' performance series "Frivolous Artist"	
Wan, Jan-Ru	The silcene Force	
Weinstein, Emily Eve	Funds for Hiring a Book Arts Apprentice	

Chair Rich congratulated all the recipients.

c. Dispute Settlement Center Month Proclamation

The Board considered voting to approve a proclamation designating November 2019 as “Dispute Settlement Center Month” and authorize the Chair to sign.

Former Commissioner Mia Burroughs read and received the proclamation. She extended greetings from Frances Henderson, who is traveling, and expressed appreciation for the support over the years, and for purchasing their services.

BACKGROUND: The Dispute Settlement Center began as a community mediation center in September 1978 to provide mediation services to Orange County residents, and was the first community mediation center in North Carolina. The Center now serves over 3,000 people through mediation, training, facilitation, and Restorative Practices for youth services, and is an essential partner for the courts, the schools, and government units, and a resource for residents.

The Center is celebrating its 40th year as a statewide leader in the provision of its services.

**ORANGE COUNTY BOARD OF COMMISSIONERS
DISPUTE SETTLEMENT CENTER MONTH PROCLAMATION**

Whereas, the Dispute Settlement Center began as a community mediation center in September 1978 to provide mediation services to Orange County residents; and

Whereas, the Dispute Settlement Center was the first community mediation center in North Carolina, and assisted in the formation of others around the state; and

Whereas, the Dispute Settlement Center now serves over 3,000 people through mediation, training, facilitation, and Restorative Practices for youth services; and

Whereas, the Dispute Settlement Center is an essential partner for the courts, the schools, and government units, and a resource for residents; and

Whereas, the Dispute Settlement Center is a statewide leader in the provision of these services; and

Whereas, the Dispute Settlement Center is celebrating its 40th year of operation;

NOW, THEREFORE, we, the Board of County Commissioners of Orange County, North Carolina, do hereby proclaim November 2019 as “DISPUTE SETTLEMENT CENTER MONTH” in Orange County and invite residents to observe this month with appropriate programs, ceremonies, and activities.

This, the 15th Day of October, 2019.

A motion was made by Commissioner McKee, seconded by Commissioner Price for the Board to approve a proclamation designating November 2019 as “Dispute Settlement Center Month” and authorized the Chair to sign the proclamation.

VOTE: UNANIMOUS

**5. Public Hearings
None**

6. Regular Agenda

a. Designation of an Agent to Administer Orange County's Application to FEMA's Hazard Mitigation Grant Program

The Board considered voting to designate an agent for Orange County's application to the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grants Program for repetitive loss property acquisition and to serve as a sub-applicant for the University of Chapel Hill to fund the installation of a generator for its Emergency Operation Center and authorize the Manager to sign.

BACKGROUND: During September 14th through 17th, 2018 Orange County was significantly impacted by torrential rain and winds due to Hurricane Florence. As a result, significant flooding occurred over the course of several days, and Orange County was included in the list of counties that received a major disaster declaration from FEMA on October 22, 2018. (Disaster number: 4393-DR-NC). Orange County is submitting a grant request for the two projects outlined below:

Project #1

Despite emergency protective measures that were taken by the County, several residential properties were flooded during Hurricane Florence due to heavy and cumulative rainfall. One of these properties, 503 Brandywine Road (PIN 9777-20-6348) within the Chapel Hill Township, sustained significant damage. Flood waters effectively destroyed the first level of the home and all of its contents. Staff completed a damage assessment of the property and concluded that the property sustained approximately \$87,000 in damage.

The property was developed sometime in 1971 before the County adopted comprehensive floodplain mitigation standards, and it is located within an identified floodplain. This property is considered to be at 'high risk' for flooding, as defined by FEMA.

Over the past 10 years, this property has suffered repetitive losses due to heavy rains and flooding. Both the Planning and Inspections Department and Emergency Services Department have coordinated efforts during this time period to secure the necessary funding to purchase the property and remove the existing residence. Based on its flooding history, the property officially constitutes a potential public safety hazard, but staff had been unable to sufficiently justify requests for acquisition and removal due to a lack of significant damage. However, as a result of the flooding that occurred during Hurricane Florence, staff can designate the property as being 'substantially damaged', consistent with the provisions of the Unified Development Ordinance (UDO) and are able to justify a grant request for acquisition. Once the County receives the grant funds, the County will acquire the property, contract for the deconstruction of the house, and restore the property to green space.

Project #2

Orange County has received a request from the University of North Carolina at Chapel Hill to serve as the sub-applicant for an emergency generator project on the University's behalf. UNC Chapel Hill is seeking grant funding to install an emergency generator to support its environmental health and safety facility on Estes Drive Extension, which serves as the campus Emergency Operations Center. The total of this grant request is approximately \$414,000. A letter of request from UNC Chapel Hill is attached.

As a part of the process, the County must adopt a resolution designating an agent to apply for and receive project assistance from FEMA's Hazard Mitigation Grants Program.

Kirby Saunders, Emergency Management Coordinator, made the following PowerPoint presentation. He said, after a declared disaster, the County is eligible for mitigation funding, which is used to reduce the impact of potential impacts:



Kirby Saunders said the country has already seen 10 major disasters this year, and this is the 5th consecutive year of \$10 billion disasters. He said this has been the costliest of all disasters in the history of the country. He resumed the PowerPoint presentation:



Kirby Saunders said the mitigation program has a significant return on investment; every \$1 spent on mitigation results in \$7 in savings in recovery. He resumed the PowerPoint presentation:

Purpose

- To designate an agent for Orange County's application for FEMA's Hazard Mitigation Grants Program for repetitive loss property acquisition.
- To serve as a sub-applicant for the University of Chapel Hill for the purchase and installation of a generator for their Emergency Operation Center.



Project #1: Acquisition – 503 Brandywine Road

- Developed in 1971, before Orange County adopted comprehensive floodplain mitigation standards.
- Located within an identified floodplain and is considered to be high risk, as defined by FEMA.
- This property has been targeted for acquisition for approximately 10 years.
- Substantial damage occurring as a result of Hurricane Florence is consistent with the provisions of the Unified development Ordinance and justifies the grant request.
- Hurricane Florence caused torrential flooding between the dates of 9/14/18 and 9/17/18.



Kirby Saunders said this has been a joint effort with the County’s Planning and Inspections department. He said this area is at high risk, being in the floodplain for the past 10 years, and had substantial damage with Hurricane Florence. He resumed the PowerPoint presentation:



September 17, 2018 – 503 Brandywine Rd.

- Flood waters filled the lower level of the home with approximately 1 1/2-2 feet of flood water.






September 17, 2018 – 503 Brandywine Rd.



Kirby Saunders said this property is in the floodplain, and has been the target of mitigation efforts for 10 years. He said the funding had not been previously available, and not until Hurricane Florence did this property suffer significant damage. He said this damage now justifies the grant. He resumed the PowerPoint presentation:



Kirby Saunders said the base elevation of the property is significantly lower, causing a large risk of potential flooding. He resumed the PowerPoint presentation:

IMPACT – Brandywine Project

Financial	Social	Environmental
<ul style="list-style-type: none"> Total cost \$322,150.00 FEMA \$242,612.50 State \$80,537.50 Further financial assistance may become necessary. 	<ul style="list-style-type: none"> Positive Impact Relocating Vulnerable Population Reduces flood levels and protects nearby properties. 	<ul style="list-style-type: none"> Demolished and returned to natural space 100 Year Deed Not a historical property In accordance with all Federal, State, and local environmental regulations.

ORANGE COUNTY NORTH CAROLINA

FEMA Property Acquisition Process

ORANGE COUNTY NORTH CAROLINA

Kirby Saunders said the property will be returned to natural space, and deeded for 100 years. He said the grant process lasts 36 months with lots of regulation, documentation and reporting. He said staff feels this is the only solution for this property. He resumed the PowerPoint presentation:

Project #2: Sub-Applicant for UNC Chapel Hill

- Orange County received request to serve as sub-applicant on the behalf of UNC Chapel Hill.
- University is seeking grant funding to install an emergency powered generator to support their Environmental Health and Safety building on Estes Drive Extension.
- Facility serves as their Emergency Operations Center.

ORANGE COUNTY NORTH CAROLINA

Kirby Saunders said staff believes this provides critical infrastructure for the area. He resumed the PowerPoint presentation:

IMPACT – Generator Project

Financial	Social	Environmental
<ul style="list-style-type: none"> Total \$414,217.00 FEMA \$310,662.75 State \$103,554.25 UNC to cover any additional costs. 	<ul style="list-style-type: none"> Project will help ensure continuity of UNC Chapel Hill's ability to maintain emergency coordination and support of the campus community including students, staff, and visitors. 	<ul style="list-style-type: none"> Unearthing a section land. Installation of concrete, wiring, and associated equipment. Compliant with all Federal, State, and Local environmental regulations.

CONCLUSION: Manager Recommendations

- Approve designating the County's agents
- Approve the submission of the Hazard Mitigation Grant Project application to North Carolina Emergency Management for submission to FEMA and authorize the manager to execute and sign all necessary documents in support of this grant.

Questions/Comments

www.enohawhmp.com

Kirby Saunders
kisaunders@orangecountync.gov
 919-245-6135

Michael Harvey
mharvey@orangecountync.gov
 919-245-2597

Kirby Saunders said this process of mitigation is in the Eno-Haw mitigation plan approved by the Board of County Commissioners in 2015. He said staff is in the process of updating the plan, which is required every 5 years, and is working with Triangle J and encouraging the public to participate in a survey, which is available through the end of the month. He said Emergency Services plans to come back to the Board by June 2020 with the updated plan.

Commissioner Greene asked if there is a reason why UNC does not submit directly for the grant.

Kirby Saunders said the campus' community does not have an active mitigation plan, which is required to apply for these funds, so the only option is to apply through the County. He said the University chose not to be a part of the County's mitigation plan at the time it was created because it was creating its own; however, this has not yet come to fruition, so they only have the option to be a sub-applicant.

Commissioner Price referred to the Brandywine Road home, and asked if this is the only one included in the application, or if there are other possible applicants.

Kirby Saunders said this is the only property for which help was requested under Hurricane Florence, and floodplain staff is reviewing others that may potentially be impacted in future situations. He said a challenge in this community is that the FEMA federal cap on property acquisitions is \$276,000, and it is difficult to meet this as most property in the area is valued higher.

Commissioner Price asked if the family has been relocated.

Kirby Saunders said not yet, as the funds have not been acquired, but the grant funds do allow relocation assistance for up to a year.

Commissioner Price said the family is awaiting the funds, while living in a bad situation.

Kirby Saunders said the house was uninsured during the last flood, and the family used its own funds to make it habitable for the time being.

Commissioner Dorosin asked if all of the \$322,000 will be paid to the family.

Kirby Saunders said the amount the family receives is based on a fair market appraisal.

Commissioner Dorosin asked if there is any idea of what that appraisal will be.

Kirby Saunders said he does not know.

Commissioner Dorosin asked if there is a range, and how much will go to purchase the property versus demolition, regrading of land, etc. He asked if there is an estimate for these costs.

Kirby Saunders said he can provide that information, and believes the tax-assessed value is \$144,000, which is not a fair market appraisal. He said the amount is based on a pre-event appraisal for fair market value, which needs to be under \$276,000. He said if the situation were to increase beyond a cost-benefit ratio that was determined by FEMA, the County could do in-kind support through paying for a survey, the closing costs, etc.

Commissioner Dorosin said an appraisal should not be needed to know how much it will cost for demolition.

Kirby Saunders said there is a draft budget with approximate costs, which can be provided to the Board.

Commissioner Marcoplos referred to the \$276,000 maximum, and asked if a place like Camelot Apartments would be viewed as one property, or divided into subunits of \$276,000 each.

Kirby Saunders said he and his staff are working with the Chapel Hill partners to target the Camelot area. He said it is considered as a condominium setup, and is considered one tract with multiple owners, which requires 100% consensus of owners. He said the only way around that is to subdivide, but he is uncertain of the status of this. He said without 100% owner consensus, mitigation efforts cannot be pursued. He said when using federal dollars, there can be no pressure or persuasion with the homeowners.

Commissioner Dorosin said the owners are looking to redo University Mall, and he would like to see affordable housing included, and offer it 1 for 1 to the people who own the units in Camelot village. He petitioned for the Board to weigh in collectively to the Town of Chapel Hill's vision process.

Commissioner Greene said Moody, which does creditworthy analyses, is paying more and more attention to hazard mitigation as an element of its evaluation.

Chair Rich asked if fact sheet and survey could be put on the website, as well as a link to the application form. She said, since all towns are participating, this should be included on those websites as well. She asked the Clerk's office to follow up on this request.

A motion was made by Commissioner Marcoplos, seconded by Commissioner Bedford for the Board to:

- 1) approve the Resolution designating Kirby Saunders as the County's Primary Agent and Michael Harvey as the Secondary Agent for this Hazard Mitigation Grant Program application;
- 2) direct the Clerk of the Board of County Commissioners to sign as the Certifying Official;
- 3) authorize the designated agent to submit the Hazard Mitigation Grant Project application to North Carolina Emergency Management for approval; and
- 4) authorize the Manager to execute and sign all necessary documents in support of this grant opportunity.

VOTE: UNANIMOUS

b. Authorization to Proceed with Phase 1 of the Proposed Eno River Mill Arts Project and Associated Lease Agreement with Hedgehog Holdings

The Board received information on the proposed Eno River Mill Arts Project and considered voting to approve the Orange County Arts Commission and staff moving forward with Phase 1 of the Project by authorizing the Manager to sign a lease agreement with Hedgehog Holdings for artist studio space at the Eno River Mill in Hillsborough.

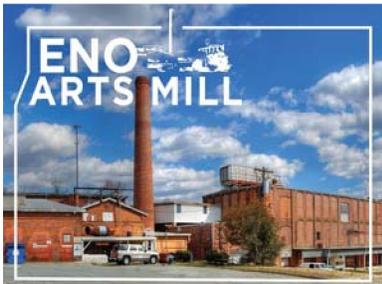
BACKGROUND: The Orange County Arts Commission (OCAC) has identified a lack of infrastructure and equitable access as the two primary barriers for a healthy creative ecosystem for Orange County artists and residents. By working in partnership with the Gold Family and its partner, Hedgehog Holdings, the OCAC seeks to activate Hillsborough's historic Eno River Mill through the arts, providing critically needed space for the creative community, as well as generating economic impact for the surrounding area.

The mill, located in West Hillsborough along the Eno River, opened as a yarn mill in 1897 and operated until 1984. It was bought by the Gold Family in 1988. Hedgehog Holdings became managing partner in 2015. Currently, it houses Weaver Street Market's commissary, the Expedition School, The Cloth Room Events Space and several small businesses. However, it has vast amounts of raw, vacant space that would be perfect for the visual and performing arts.

The project is proposed to move forward in three phases, beginning with establishing thirteen (13) move-in-ready artist studio spaces in Phase 1, and eventually providing space in Phases 2 and 3 for additional programs. Phase 1 and the overall project will increase arts access for residents regardless of socio-economic status, while transforming the Mill into an arts destination and economic asset for the Town of Hillsborough and the County. Approval to move forward with Phase 1 and the lease agreement with Hedgehog Holdings will provide thirteen (13) affordable artist studio spaces for local visual artists.

Pending Board approval, staff will develop a press release and pursue other opportunities to publicize the project, and specifically the availability of the thirteen (13) artist studio spaces.

Katie Murray, Arts Commission Coordinator, said the Arts Commission has been evaluating current needs, and actively working to serve the creative community. She said the three largest needs are: a stronger local arts agency; physical space for the arts; and increased accessibility to the arts. She said Hillsborough is a hotbed for the arts right now, and the Hillsborough Town Board actively supports the idea for the Eno Arts Mill. She said the Mill is a wonderful, accessible location, and the timing is right. She made the following PowerPoint presentation:



ENO ARTS MILL
Primary Needs

- 1 A stronger Local Arts Agency (OCAC)
- 2 PHYSICAL SPACE
- 3 Increased accessibility to the arts

ENO ARTS MILL
Hillsborough

- o Supportive, pro-arts community
- o Location
- o Growth

ENO ARTS MILL

1897-1984	1988	2015
Yarn and fabric mill. Employed 600 people who lived in 148 nearby mill homes.	Acquired by the Gold Family	Hedgehog Holdings, managing partner

ENO ARTS MILL

Weaver Street MARKET

100

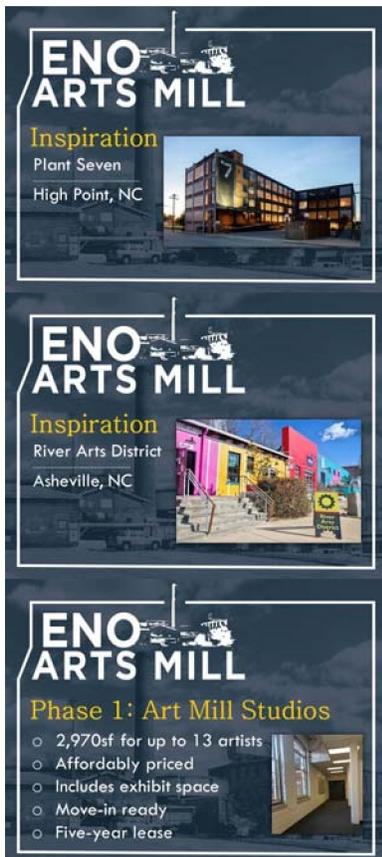
Katie Murray said many compatible businesses are already located here. She resumed the PowerPoint presentation:

ENO ARTS MILL
Hedgehog Holdings
A Raleigh-based historic property development and leasing company.

Katie Murray said the Mill is family owned, and is listed on the National Registry of Historic Places. She resumed the PowerPoint presentation:



Katie Murray said the Torpedo Factory gets approximately ½ million visitors per year. She resumed the PowerPoint presentation:



Katie Murray said Hedgehog would do the upfitting for the space, and minimal upfit is needed. She resumed the PowerPoint presentation:



ENO ARTS MILL

Phase 1: Art Mill Studios

- Keep money local
- Provide new patrons for West Hillsborough businesses through receptions and open studio tours
- Artists = increased property value

Katie Murray said artists need space have to go outside of Orange County now. She resumed the PowerPoint presentation:



ENO ARTS MILL

Phase 1: Art Mill Studios

Five-year Budget Forecast

- Allows for three vacant studios in year one, two in year two, one in year three
- Revenue from classes would offset vacant space



ENO ARTS MILL

Phase 1: Art Mill Studios

Five-year Budget Forecast

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
INCOME	\$21,940	\$21,470	\$29,332	\$40,225	\$41,548
EXPENSE	\$28,260	\$27,185	\$38,314	\$29,887	\$48,685
NET	\$-6,320	\$-5,715	\$1,418	\$1,440	\$-7,613

*Deficit would be paid for with Article 46 funding



ENO ARTS MILL

Phase 2: Studio 29

- 3,300sf of open space to be used for classes, events, and exhibits
- OCAC to seek grant support for seed funding




ENO ARTS MILL

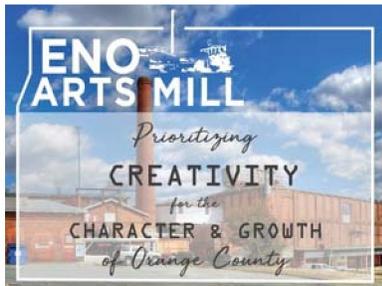
Phase 3: The Arts Mill



Katie Murray said there is a lot of potential for future opportunities for other types of arts, such as a children's theater or visual arts space, which coincides with Hedgehog's plan to develop low cost and/or subsidized housing for artists. She resumed the PowerPoint presentation:



Katie Murray said the Arts Commission is in the process of setting up a nonprofit 501(c)(3) to consider a future capital campaign to accommodate growth ideas.



Fred Joyner, Arts Commission Board Chair, thanked the BOCC for listening to this idea. He said he has been a beneficiary of art spaces in the past, and was an implementer and advocate for this type of work in D.C., which changed his practice as an artist. He said he has also expanded these efforts to international work. He said he has been able to witness how these projects benefit the community, and learned what needs to be done to make it happen. He said communities need to build resilience, and this type of project does just that. He said these types of spaces have helped him to become the artist he is today, and have helped him grow.

Frank Gaylor, Hedgehog Holdings owner, said it is fortunate for Orange County to have people like Katie and Fred who are passionate about the arts. He said this old building needs creative people. He said it is on the National Register of Historic Places, and he is excited about the opportunity to help combine everyone's efforts. He said his company has negotiated well, and wants to make it happen.

Commissioner Dorosin said this is exciting, and asked if it is understood how this will work operationally. He said part of the goal is to create space for artists who may not have resources, and asked if there will be any special type of targeting for artists with low financial resources.

Katie Murray said the County would be renting the space from Hedgehog, and the Arts Commission will put out a call for space, and give a deadline. She said the Arts Commission will look at the need, where the artists are in their career, the type of art, and will select. She said there is a desire to target younger artists who do not have home studios or financial resources.

Commissioner Dorosin asked if the Arts Commission will rent the space from the owner, and if the County will collect rents.

Katie Murray said yes. She said an artist/manager will possibly serve as an onsite point person and receive reduced rent, but this is not fully worked out.

Commissioner Dorosin asked if the criteria will be publicly available.

Katie Murray said yes, just like any other call.

Commissioner Dorosin asked if some spaces will be shared by multiple artists.

Katie Murray said they could be. She said the larger spaces would be \$500 a month, that could be shared, and there is a maximum of 13 artist spaces available.

Commissioner Price asked about the outlay for County, and if the County has to pay the rent and then get reimbursed by the artists. She asked if there is a timeline in place for when this will be available.

Katie Murray said this is still being worked out. She said the space is move-in ready, with the exception of a bathroom that needs to be installed, which Hedgehog will do. She said it may be a question of timing, and the Arts Commission has the means to pay upfront if needed.

Commissioner Price asked if it is known when Hedgehog needs be paid for the first month.

Katie Murray said a firm start date is not yet set, as commitments are needed from at least 10 artists before the County will lease the space.

Bonnie Hammersley said the lease will not be signed until there are 10 artists ready to sublet from the County. She said from an accounting perspective, it will have an expenditure line and a revenue line. She said the timing could be slightly off, but it will work out.

Katie Murray said it will take about 60 days to install the plumbing, and she expects there will be more people interested than there is space.

Commissioner Price asked if the lease would be for one year.

Katie Murray said that the County's lease will be for 5 years, and the artist's lease will be for one year.

Commissioner Greene applauded the work that has been put into this project, and said it is really exciting for artists to engage with the public. She said it is essential to how they practice, and it is significant that the gap can be filled by Article 46 funds, as this is an economic development effort.

Commissioner Bedford asked if the 30% commission is standard.

Katie Murray said yes, it is a common standard for sold artwork, but can vary a bit. She said artists realize that the property manager offers the space to sell their work, so some of the cost needs to go back to them to continue the ability to service the space.

Commissioner Bedford said this is a great opportunity, but she can see where the County might have to chase rental monies. She said the arrangement needs someone to oversee cash management and funds control, and it may be necessary to recruit some accounting talent to protect these dollars. She said in the big picture, this project is helping the artists and their development, and they are getting low market rents. She said Eno Mill will definitely benefit from a rental arrangement, but 20 years from now, the County will still be

renting. She said she knows it is early, but encouraged the Arts Commission to not give up on the long-term vision of purchasing space.

Katie Murray said that in the arts world, owning or renting space is a constant debate, as so much upkeep goes into just maintaining the space.

Commissioner Dorosin said if the County owned the property, there would be no property tax revenue.

Chair Rich said she had the opportunity of going to Minneapolis earlier with Katie Murray this summer, and heard about several very positive projects. She said she recently went to a seminar on a circular economy, of which this is a great example. She said she would like to see sustainability worked into the plan with the artists' space, encouraging no waste. She said she is excited about the opportunities.

Commissioner Price thanked everyone who has been involved. She said the community has been waiting in Hillsborough for 2-3 decades to make this happen. She said she is optimistic that it will work, and add another dimension to Orange County.

Commissioner Dorosin said he hopes this opportunity will be used to reach a diverse cross section of the community.

Chair Rich said the County should promote this in as many ways as possible.

A motion was made by Commissioner Greene, seconded by Commissioner Price for the Board to:

1. Approve Phase 1 of the Project and authorize the County Manager to sign a lease agreement with Hedgehog Holdings for up to five years consistent with the rent schedule outlined in the attached project outline. This authorization is contingent on approval by the County Attorney and commitments from ten or more artists to sublease the space from Orange County;
2. Authorize the County Manager to sign sub-lease agreements with artists according to the sub-lease rate schedule detailed in the attached project outline, pending review by the County Attorney; and
3. Authorize staff to prepare a budget amendment to set up the program and account structure in the Article 46 fund.

VOTE: UNANIMOUS

7. Reports
None

8. Consent Agenda

• **Removal of Any Items from Consent Agenda**

Chair Rich said there was a request to pull item 8-f from the consent agenda for public comment.

Chair Rich said she has some revisions to the minutes in item 8-a.

• **Approval of Remaining Consent Agenda**

A motion was made by Commissioner McKee, seconded by Commissioner Greene to approve items 8-b, 8-c, 8-d, 8-e and 8-g on the Consent Agenda.

VOTE: UNANIMOUS

b. Fiscal Year 2019-20 Budget Amendment #2

The Board approved budget, grant, and capital project ordinance amendment for fiscal year 2019-20 for the Department of Social Services; Animal Services; Library Services; Asset Management Services; County Capital Projects; and the Health Department.

c. Health Department Mobile Dental Clinic Contract

The Board approved a contract with Lifeline Mobile for \$445,748 to purchase a mobile dental clinic, and authorized the Manager to sign the contract.

d. Amendment to Sections of the Code of Ordinances

The Board amended the Code of Ordinances to clarify an inconsistency in definitions.

e. Disaster Debris Removal and Clearance Service Agreement

The Board approved an Agreement with Crowder Gulf, LLC for the purpose of providing Disaster Debris Removal and Clearance Services and authorized the Manager to sign the agreement.

g. Support for Orange County Opioid Task Force

The Board approved expressing support for an Opioid Task Force to coordinate efforts to address opioid overdose in Orange County and will be facilitated jointly by the Orange County Health Department and the UNC Medical Center.

f. John M. Link, Jr. Government Services Center Remediation Project – Rejection of Apparent Low Bid

The Board will consider voting to authorize the County Manager to reject the non-responsive apparent low bid for the Remediation of the John M. Link, Jr. Government Services Center project that was opened on Thursday, September 25, 2019.

Ryan Plankenhorn, Resolute Building Company, provided public comment on the recent bidding process for the Link Center. He said Resolute was apparently the lowest bidder by \$700,000, but the architect did not agree to accept their bid due to it not being responsive and responsible. He said Resolute does not agree with this recommendation, and asked if the County would reconsider the bid prior to making a decision. He said the architect's question was regarding how Resolute would comply with the project as all of the qualifications were not met. He said in Resolute's bid package, it was said that Resolute (General Contractor) was in association with Blue Sky Construction (Abatement and Demolition Contractor), and were able to ensure the best, safest product possible could be delivered by combining the strengths of these two companies. He said there was confusion when Resolute was asked what "in association meant". He said, in the letter to the architect, Resolute explained that if it were awarded the project, it would set up a formal relationship with Blue Sky, who had the required certifications for remediation. He said the County said that since Resolute did not have a joint venture with Blue Sky in place at the time of the bid, the bid would be rejected. He said before the County spends an additional \$700,000, he would ask the BOCC to reconsider. He said if that is not possible, he would recommend that the project be rebid in the next couple of weeks.

John Roberts said the RFP required a specific certification because of the remediation of the project. He said it is an absolute requirement, and Resolute did not meet this requirement. He said the RFP stated that a formal arrangement with a subcontractor, with the required certification, is necessary. He said Resolute said it was in association with Blue Sky, which has the required certification, but stated that Blue Sky is not a subcontractor. He said Resolute said the formal association would be complete when the bid was accepted. He said he looked for case law, and could not find any that spoke either side of this issue. He said this is the first time in 10 years that the County has rejected a low bid, so there is no precedence. He said it is recommended that the bid be rejected since there is no subcontractor with the required certification, and no professional business relationship between Resolute and Blue Sky.

Commissioner Marcoplos asked if the practicalities of a business association could be described, and if it is a formal arrangement.

John Roberts said it is an agreement between two entities, and the filing of some paperwork. He said it is a simple process, and the architects were surprised that the bid came in without the filing already in process.

Commissioner Marcoplos asked if there is a reason, from a financial standpoint, why a business would hold off on the filing until there is a certain need for that relationship.

John Roberts said he is not certain, but the County would not want to award a bid without the certification, because it would not be a firm, binding bid.

Commissioner Marcoplos asked if the County can accept a bid, with a contingency of completion of the business relationship, before the work is done.

John Roberts said he has never done it, and is not certain if it can be done legally.

Commissioner Marcoplos said Resolute is a local company with a strong track record, and, while he understand what happened, he is having a hard time understanding why there is no flexibility with this question.

Commissioner Dorosin asked if there is a reason why the County could not just rebid the project, as Resolute would probably get it due to the cost.

John Roberts said one path forward would be to reject all of the bids, and authorize a rebid for the project.

Commissioner Marcoplos asked if this process has any impact on bidder rights.

John Roberts said the County has the absolute authority, under state law, to reject all bids, so there is no infringement on the bidder's rights.

Commissioner Marcoplos asked if there are any drawbacks to rejecting all bids.

John Roberts said he is not certain.

Commissioner McKee said it is clear that the BOCC can reject all bids, and call for a rebid. He said it is quite clear that the process or requirements were not met, so he sees no reason not to reject all bids and to put it back out for a bid.

Commissioner Price asked if the BOCC is required to consider the second lowest bid, if the lowest was rejected due incomplete qualifications.

John Roberts said usually, yes, the next low bidder would be negotiating for the contract. He said the BOCC has not yet rejected the lowest bidder, so there are no rights to consider. He said it is within the Board's authority to reject all bids. He reminded the BOCC that anyone can sue for anything, at any time.

Commissioner Dorosin said the options are to reject all bids and rebid, and Resolute could rebid while meeting all of the qualifications; or the Board could reject Resolute's bid and take next highest bid, which is not appealing to anyone because of the significant difference in cost. He recommended rejecting all bids, and put it back out to allow Resolute to meet the qualifications, and later accept the lowest bid, which would probably be Resolute.

A motion was made by Commissioner Dorosin, seconded by Commissioner McKee to reject all bids and put the project out again for bid.

Commissioner Marcoplos asked if there is a timeline for this process.

John Roberts said it took 2-3 weeks last time.

Commissioner Price asked if the other applicants would be notified.

John Roberts said yes.

VOTE: UNANIMOUS

a. Minutes

The Board will consider correcting and/or approving the minutes from October 1 and 3, 2019 as submitted by the Clerk to the Board.

Chair Rich said she would like to clarify some things in the minutes. She referred to page 2 of the minutes from October 1, where Commissioner Dorosin said he wanted to start a committee to review universal Pre-K. She asked Commissioner Dorosin if it is acceptable to review the information already gathered by the Manager's office, prior to the creation of this committee.

Commissioner Dorosin said he wants to adhere to a 12-month timeline, and he does not mind reviewing that information, but wants to get this done most effectively.

Chair Rich referred to line 42 of page 3, and said Commissioner Dorosin asked about the reconfiguration of the Greene Tract land. She said she met with Chapel Hill this week, and she wants to clarify that Chapel Hill had voted on the reconfiguration twice; Chapel Hill wants the Board to know it voted, but she said the project cannot move forward until there is a plan for the usage.

Commissioner Dorosin asked if anything has been filed in the Register of Deeds Office that the land has been reconfigured.

Chair Rich said no, it has not.

Commissioner Dorosin said everyone has voted, but no action has been taken.

Chair Rich said it is not in anyone's interest until a purpose for the land is determined.

Commissioner Dorosin clarified that the land is not reconfigured.

Chair Rich said correct; Chapel Hill voted to reconfigure, but it has not been completed yet.

A motion was made by Commissioner McKee, seconded by Commissioner Marcoplos to approve the minutes.

VOTE: UNANIMOUS

9. County Manager's Report

Bonnie Hammersley reminded the Board that the Economic Development Summit is tomorrow, and she hopes to see everyone there.

10. County Attorney's Report

John Roberts said that the Legislature has not adjourned yet, but the Senate expects to adjourn by the end of the month.

11. Appointments

Chair Rich said at the last work session, the Board talked about discussing applicants at future work sessions. She said the Clerk's office will be working on getting a different data system, and Commissioner Dorosin and Commissioner Price are working on reducing the length of the application. She said some appointments need to be done now.

a. Jury Commission – Appointment

The Board will consider making an appointment to the Jury Commission.

Chair Rich said the need for this appointment is very timely, as the Jury Commission chooses the juries at the end of the year. She said she spoke with Clerk Kleinschmidt, who asked the Board to make this appointment, because this is the first time that he has done this.

Commissioner Dorosin said he appreciates the letter from the Clerk, but is concerned that the candidate has already served 8 terms, and the other two members have served since

2015 and should have institutional memory. He said his concern is to rotate people out, and he thinks the BOCC ought to appoint someone else.

Commissioner Marcoplos asked if the responsibilities of this commission could be clarified.

Commissioner Dorosin said it coordinates the roll for who is in the jury pool.

Commissioner Marcoplos said Mr. Hall is a great guy to do that, and has done a great job.

Commissioner Dorosin said he does not doubt that.

Commissioner Price said she agrees that it is good to rotate, but she struggles with this with all of the boards. She said when a staff person makes a request based on the quality, or timing, of the candidate, she wants to respect that request. She asked if other people been interviewed or vetted.

Commissioner Marcoplos asked if the length of term is known.

Commissioner McKee said the term length is two years.

Commissioner Marcoplos said this is why the BOCC is looking to change way it reviews these applicants. He suggested honoring the recommendation in this case, and transition shortly to a new way of vetting applicants, so the Board will be better suited to deal with these issues in the future.

A motion was made by Commissioner Marcoplos, seconded by Commissioner Price to approve the recommendation for appointment to the Jury Commission.

Commissioner Dorosin said he respectfully disagrees. He said the BOCC has talked about engaging other people on boards and commissions, and keeps putting it off. He said this board has a three-term limit, and this candidate has already served 8; so the BOCC is not even following its own guidelines. He said the Board talks a lot about stuff, but does not act. He said he will vote against the recommendation.

Commissioner Marcoplos said this is a good point, and asked if this appointment could be put off.

Chair Rich said unfortunately, in this case, the Board cannot put it off until there is a new, more thoughtful process. She said the Board knew there would be one or two snags with working out the new process.

Commissioner Price said this is time sensitive, and there is no chance to vet other applicants, or go through the new process, there is a compelling reason to approve this recommendation. She asked if Mr. Hall can just stay on, or if he must take the oath of office.

Chair Rich said he, or whoever fills the roll, needs to be sworn in right away.

VOTE: Yeas, 4 (Chair Rich, Commissioner Greene, Commissioner Marcoplos, Commissioner Price; Nays, (3) Commissioner McKee, Commissioner Bedford, Commissioner Dorosin

b. Nursing Home Community Advisory Committee – Appointment

The Board will consider making an appointment to the Nursing Home Community Advisory Committee.

Chair Rich said this is the case of a one-year preliminary terms, and the Board cannot choose someone else.

A motion was made by Commissioner Bedford, seconded by Commissioner Price to approve the appointment.

VOTE: UNANIMOUS

Commissioner Dorosin asked about the question of process of filling vacancies on this board. He said there is an at-large vacancy that has existed since 2017. He asked if the BOCC can nominate someone from the list to start the one-year training process.

Chair Rich said the Board has asked this question a number of times, and she is unclear why the Board cannot do as Commissioner Dorosin suggests.

Commissioner Price said she thinks the person is interviewed prior to the training.

Chair Rich asked if the Board could select someone to be interviewed.

Chair Rich asked if the Clerk's Office could provide clarification on the need to fill a seat that has been open for a long time, and what is the process of filling that seat if there are other applicants on the list.

12. Information Items

The Board received the following information items:

- October 1, 2019 BOCC Meeting Follow-up Actions List
- BOCC Chair Letter Regarding Pledge of Allegiance at Board Meetings

13. Closed Session

None

14. Adjournment

A motion was made by Commissioner Dorosin, seconded by Commissioner Marcoplos to adjourn the meeting at 9:20 p.m.

VOTE: UNANIMOUS

Penny Rich, Chair

Sherri Ingersoll
Deputy Clerk