

2018 Proposed Town of Davidson Floodplain Ordinance Revisions



Presented to:
Davidson Board of Commissioners
August 7, 2018

Overview

- **New Floodplain Maps become effective November 16, 2018**
- **Davidson (as well as Charlotte, Cornelius, Huntersville, & Mint Hill) must adopt revised ordinances or risk NFIP suspension.**
- **NC revised the “Model Floodplain Ordinance” including some required changes and many suggested changes**
- **County informed the Storm Water Advisory Committee (SWAC) of impending updates**

Overview

- County staff (at the recommendation of SWAC) formed a stakeholders group to review the proposed changes to the Floodplain Ordinance (using the City of Charlotte ordinance as an example).
- June 29, 2018 - The Stakeholders unanimously endorsed the proposed changes to the ordinance
- July 16, 2018 - County Attorney made minor changes
- July 19, 2018 - SWAC endorsed the proposed ordinance
- July 26, 2018 – State floodplain agency (North Carolina Department of Public Safety, NCDPS) reviewed Davidson's updated floodplain ordinance and deemed it compliant with NFIP requirements.

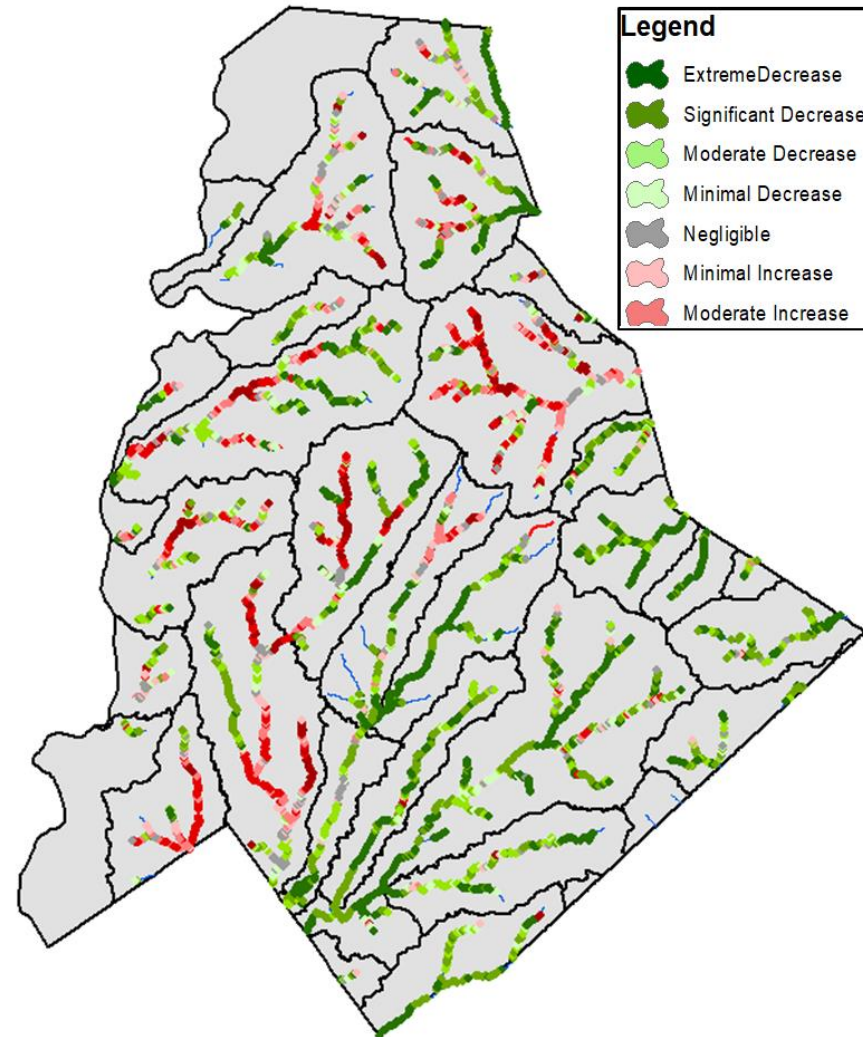
Impacts of NFIP Suspension

- No new NFIP flood insurance policies or renewals
- No Federal grants or loans for development in SFHAs under Federal programs
- No State or Federal disaster assistance to communities or to repair insurable buildings located in SFHAs
- No Federal mortgage insurance or loan guarantees in Floodplain
- Federally insured or regulated lenders must notify applicant seeking loans in Floodplain that:
 - There is a flood hazard
 - The property is not eligible for Federal disaster relief
 - Liability of flood losses within the FEMA published Floodplain falls to the respective community.

New Floodplain Map Effects

STATUS OF FLOOD PRONE BUILDINGS (BY COMMUNITY): BEFORE AND AFTER PHASE 3 STUDY

Status	Charlotte	Davidson	Huntersville	Mecklenburg	Total
Total FPB Pre-Phase 3	215	23	37	25	300
Total FPB Post-Phase 3	156	13			
Change in Total FPB	-59	-10			
FEMA FPB Pre-Phase 3	137	10			
FEMA FPB Post-Phase 3	108	11			
Change in FEMA FPB	-29	1			
Community FPB Pre-Phase 3	78	13			
Community FPB Post-Phase 3	48	2			
Change in Community FPB	-30	-11			
Zone X to FEMA Floodplain	17	1			
FEMA Floodplain to Zone X	62	6			
Change to FEMA floodplain status	-45	-5			
Community to FEMA	30	6			
FEMA to Community	14	0			
Change to FEMA floodplain status	16	6			
Zone X to Community	20	0			
Community to Zone X	34	5			
Change to Community floodplain status	-14	-5			
FPB with EC FFE below FPE	36	0			
FPB with No FFE on EC	1	0			
FPB with No EC	75	5			



Legend

- Extreme Decrease
- Significant Decrease
- Moderate Decrease
- Minimal Decrease
- Negligible
- Minimal Increase
- Moderate Increase

Key:

FPB – Flood Prone Buildings (includes accessory buildings)

FEMA – Regulatory flood zone indicating insurance requirement

Community – Future Conditions flood zone indicating local regulatory requirements

Zone X – Areas outside extents of FEMA and Community floodplains

EC – Elevation Certificate, a form that includes surveyed building elevations

FFE – Finished Floor Elevation, a component of the Elevation Certificate that indicates a building's lowest livable floor

FPE – Flood Protection Elevation, a local floodplain development requirement, equal to the Community flood elevation + 1' surcharge

Questions

Following Slides
Provided if Details
Are Requested

Ordinance Update Categories

- Minor Updates
- NCDPS Required Updates
- Other Staff Updates
- Optional Considerations

Minor Ordinance Updates

- Revising definitions for clarity
- Adding definitions for clarity
- Correcting references & typos

NCDPS-Required Changes

1. Date of FIS – November 16, 2018
2. Recreational Vehicle definition modified
3. Added standards for storage tanks
4. Substantial damage / improvement timeframe for 50% improvement

NCDPS-Required Changes

4. Substantial damage / improvement timeframe for 50% improvement
- No timeframe specified in ordinance now
 - State minimum is 1 year
 - Staff proposes a 10-year timeframe
 - Aligns with 10-yr timeframe for 25% improvement in ordinance now
 - Aligns with current practice of defining a project
 - Reduces potential flood losses rather than extending potential flood losses
 - Allows for 80 additional CRS points

Substantial Damage / Improvement

- Purpose: To prevent significant investment (50% of Market Value or two 25%) in a flood prone building without first bringing the structure into compliance with the Floodplain Ordinance.
- Provision only applies to modification of existing buildings (structures) that flood during a 100-yr event (non-compliant structures), which includes five (5) residential buildings and two (2) commercial buildings in Davidson.

Substantial Damage / Improvement

Jurisdiction/ ETJ	Non-Compliant Structures		
	# Residential	# Commercial	Total
City of Charlotte	736	349	1085
City of Charlotte - ETJ	81	8	89
Town of Cornelius	38	3	41
Town of Davidson	5	1	6
Town of Davidson - ETJ		1	1
Town of Huntersville	20	3	23
Town of Huntersville - ETJ	12		12
Town of Matthews	10		10
Town of Mint Hill	13	2	15
Town of Mint Hill - ETJ	1		1
Town of Pineville	19	38	57
Town of Pineville - ETJ	2		2
Total	937	405	1342

Substantial Damage / Improvement

Example: 10-Yr cumulative

Bldg Value: \$400,000

Flood depth: 5.8 ft

2011 Damage: \$125,000
(exceeds 1, 25%=\$100,000)

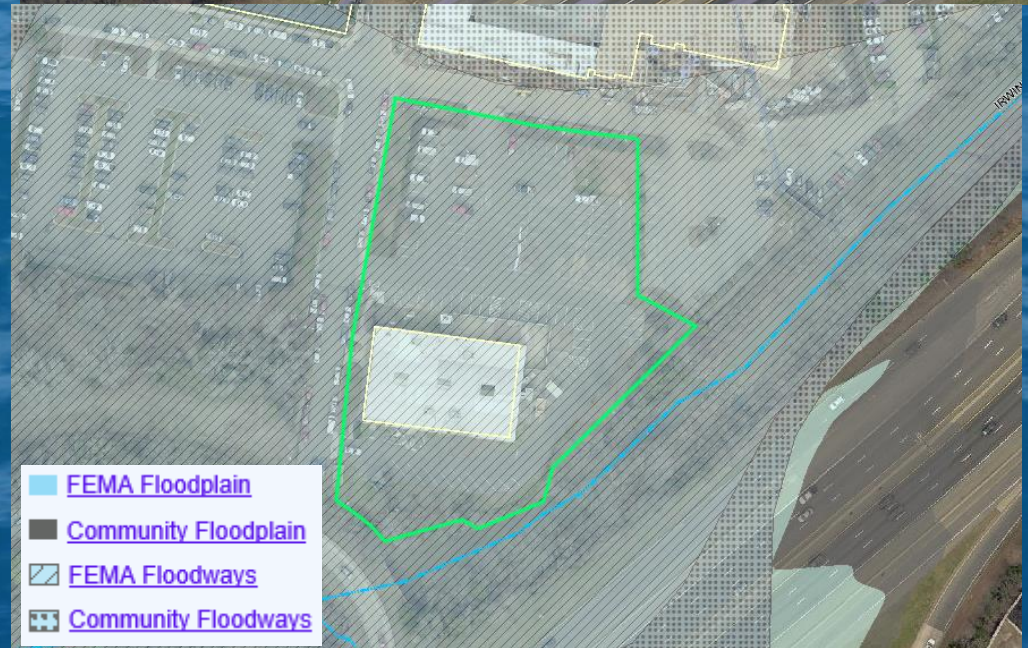
2016 Renov.: \$21,000

2017 Renov.: \$23,000

2018 Renov.: \$55,000

(Cumul. Invest.=\$224,000
exceeds 50% =\$200,000)

Owner Required to Flood
Proof building before 2018
Renovation



Substantial Damage / Improvement

Example: 1-Yr cumulative

Bldg Value: \$400,000

Flood depth: 5.8 ft

2011 Damage: \$125,000
(exceeds 1, 25%=\$100,000)

2016 Renov.: \$21,000

2017 Renov.: \$23,000

2018 Renov.: \$55,000
(Cumul. Invest.: \$224,000)

2019 Renov.: \$99,999

2020 Renov.: \$99,999

2021 Renov.: \$99,999

(Cumul. Invest: \$523,997)



Other Staff Updates

1. Added a no-rise certification option for General Floodplain Development Permit.

1. **General Floodplain Development Permit** – The intent of the General Floodplain Development Permit (GFDP) is to allow uses or activities in the Community Special Flood Hazard Area (including the FEMA Floodway and Community Encroachment Area) which inherently will not increase FEMA and/or Community Base Flood Elevations. The following uses and activities are permitted under a GFDP, without the need for an Individual Floodplain Development Permit, ~~flood study Floodway Engineering Analysis~~ or variance, as long as they result in no Technically Measurable increases in FEMA and/or Community Base Flood Elevations. A no-rise certification may be required by the Floodplain Administrator to demonstrate no technically-measurable increases.

- Allows Floodplain Administrator flexibility to offer a No-Rise Certification statement rather than requiring a full Floodway Engineering Analysis for demonstration of “no Technically-Measurable increases”
- Addresses a NCDPS concern for certain GFDP activities

2. Added a requirement (and standard) for demonstration of compliance with the Federal Endangered Species Act (ESA).

5. If placing fill within the Special Flood Hazard Area, a demonstration of compliance with Section 9 and 10 of the Federal Endangered Species Act (ESA) is required. The demonstration of compliance must be provided to the Floodplain Administrator.

- FEMA (under 44 CFR 60.3(a)(2)) requires the community to document compliance with the ESA and ensure Incidental Take permits are obtained, if needed, prior to issuing a floodplain permit.
- May 24, 2018 – FEMA issued a ROD to clarify this requirement

2. Demonstration of ESA Compliance (cont.)

- Demonstration can take the form of:
 - Proof of a 404 Army Corps Permit
 - An ESA evaluation by a qualified professional indicating "No Potential for a Take"
 - Determination Letter from Fish & Wildlife Services

2. Demonstration of ESA Compliance (cont.)

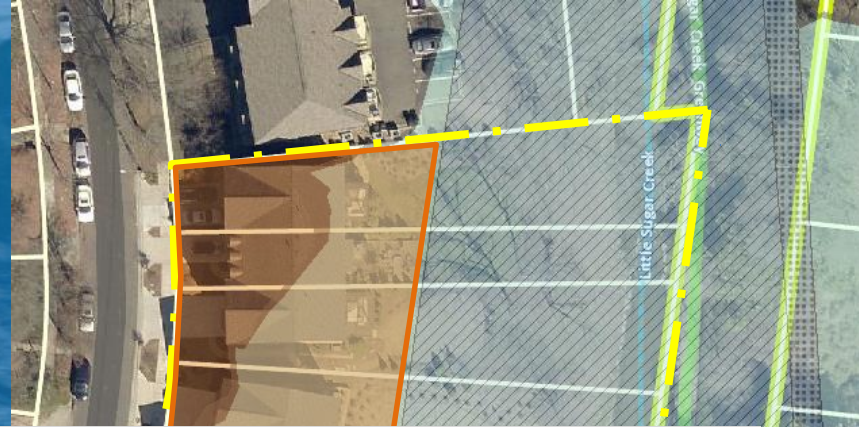
- a) Developer applies for FDP to fill the floodfringe
- b) Agency issues the FDP to fill the floodfringe above the flood elevation with no Map Change required
- c) Builder purchases lot, builds home, sells to homeowner
- d) Homeowner required to pay Flood Insurance for Zone AE (@\$870-\$1200/yr)



Other Staff Updates

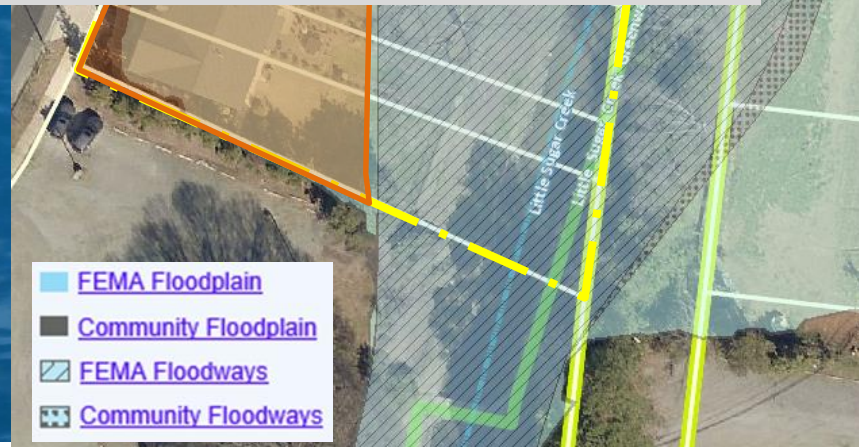
2. Demonstration of ESA Compliance (cont.)

- e) Homeowner requests a Map Change due to fill (LOMR-F)
- f) Homeowner submits a form for Floodplain Administrator signature certification



“For LOMR-F requests, I acknowledge that compliance with Sections 9 and 10 of the ESA has been achieved independently of FEMA’s process”

- g) If approved by FEMA, homeowner now has the option for flood insurance at a Zone X rate @\$450/yr.



Other Staff Updates

3. Added a flood resistant materials requirement to all construction materials below the Flood Protection Elevation (FPE).

8. A statement that all construction materials below the FPE shall be constructed entirely of flood-resistant materials at least the FPE.

- Currently the ordinance requires this for Elevated Buildings only.
- This update is part of the Model Ordinance Template.

Other Staff Updates

4. Added a requirement preventing enclosed areas of a elevated buildings from being temperature-controlled.

7. The enclosed area shall not be temperature controlled.

- This helps ensure crawl spaces that are subject to flooding are not converted to living space.
- This update is part of the Model Ordinance Template.

5. Define a Floodway Engineering Analysis

- Current ordinance language uses several terms for the same analysis such as:
 - Flood study
 - No-rise / no impact study
 - Hydraulic models
 - Hydrologic and hydraulic analysis
- This definition is part of the Model Ordinance Template.

Optional Considerations

1. Regulate to Preliminary Map Elevations

- Currently Davidson regulates “Effective” Flood Maps.
- When maps are revised, they go through draft phase, preliminary phase, then effective phase. Once maps get to the “preliminary” phase, the elevations are pretty well set and typically do not change during the 9 to 12 month period before becoming “effective”.
- Regulating to the higher of the “preliminary” and “effective” elevations protects new buildings from being considered noncompliant within 12 months.
- Charlotte, Matthews, Mint Hill, Matthews, and Pineville have this additional requirement in their ordinance and the other Towns are considering adding this as part of the ordinance update.

Optional Considerations

2. Adding Temporary Encroachment language

- Allows County to use judgement in granting some flexibility to the development community. For example, erosion control sediment basins (temporary structures) must be located at the lowest area of a construction site and thus sometimes can be in the floodway. Since basin construction typically requires adding fill for construction of the berm, the current ordinance requires a full Floodway Engineering Analysis. Rather than require an engineer to perform a full Floodway Engineering Analysis, this new provision would allow the County to offer some flexibility to not require a full Floodway Engineering Analysis if the basin will likely not have impacts (such as if the basin berm is small)

Optional Considerations

3. Adding a Community BFE Exemption

- This provision is less flood-protective than current standard
- This provision allows some flexibility to a homeowner who:
 - Has a home with the lowest finished floor elevation in compliance with the FEMA minimum standard plus 1 foot, but not in compliance with the Community minimum standard (we call this a “noncompliant building”);
 - Wants to make significant improvements their home; and
 - Signs and records acknowledgment that they are at a greater flood risk.
- Since the floodplain maps change every 5-8 years, sometimes existing buildings “become” noncompliant buildings because of a map change alone, and the owners are limited to the improvements they can make before having to raise lowest finished floor. The new provision would be less protective, but would allow homeowners some re-building flexibility while maintaining FEMA’s minimum standards.