

TC-4-10 Floodprone Area Regulations

This proposal was initiated by the Stormwater Management Advisory Commission (SMAC). This text change proposes to limit development within the 'floodway fringe' and 'future conditions flood hazard areas' to those uses permitted within designated 'floodways'; uses that have low flow-obstructing characteristics such as surface parking, general farming and horticulture and recreational uses such as golf courses, driving ranges, play courts and greenways.

In addition, TC-4-10 proposes to eliminate the current exemption for lots less than one-half-acre in size which were created prior to May 3, 2006, but retains the provision to allow the City Council to approve a variance when unique circumstances exist such that strict adherence to the provisions will result in unnecessary hardship or create practical difficulties.

Currently, land uses allowed within the 'floodway fringe' and 'future conditions flood hazard areas' are governed by their respective zoning districts. However, development, defined as 'bulk lot coverage', shall not exceed 50 percent of these areas.

- **Floodway.** Floodway means that portion of channels of streams necessary to carry and discharge the waters of the base flood without increasing the water surface elevation of that flood more than one foot at any point.
- **Floodway fringe.** Floodway fringe is that portion of the floodprone area that would be inundated by the one per cent (1 percent) annual chance flood.
- **Future conditions flood hazard area.** Future conditions flood hazard area means the land area that would be inundated by the one per cent (1 percent) annual chance flood based on future conditions hydrology.
- **Bulk lot coverage....** the amount of net lot area within designated floodway fringe areas and future conditions flood hazard areas expressed in terms of a percentage that is covered by any obstruction restricting or displacing the flow of flood waters and any fill added to the lot after the application of this regulation.



Certified Recommendation

Raleigh Planning Commission

CR# 11392

Case Information: TC-4-10/Floodprone Area Regulations

Comprehensive Plan Guidance

<i>Applicable Policy Statements</i>	<p>EP 2.2 – Environmentally Sensitive Development</p> <p>EP 2.3 – Open Space Preservation</p> <p>EP 3.2 – Neuse River Protection</p> <p>EP 3.3 – Water Supply Protection</p> <p>EP 3.7 – Preserving Watercourses</p> <p>EP 4.2 – Floodplain Conservation</p> <p>EP 4.3 – Development in the Floodplain</p> <p>EP 4.5 – Watercourse Protection</p> <p>EP 4.7 – No adverse Impact</p> <p>PU 3.10 – Water Quality Improvements</p>
<i>Action Items</i>	<p>EP 4.4 – Floodplain Regulation</p>

Summary of Text Change

<i>Summary</i>	<p>Revisions to the City's Floodprone Area Regulations to limit development within designated 'floodway fringe areas' [land area inundated by the 1 percent annual chance flood (100-year floodplain)] and 'future conditions flood hazard areas' [land area inundated by the 1 percent annual chance flood based on projected build-out (future 100-year floodplain)]. This proposal was initiated by the Stormwater Management Advisory Commission. The text change would implement several policies recommended by the Comprehensive Plan.</p>
----------------	---

Summary of Impacts

<i>Impacts Identified</i>	<p><u>Adoption of TC-4-10:</u></p> <p>Increased number of lots which may experience practical difficulties or hardships when significantly encumbered by a floodprone area designation.</p> <p><u>No Action:</u></p> <p>Property damage due to flooding, increased erosion, reduced water quality, loss of habitat and damage to the natural ecosystem.</p>
---------------------------	---

Public Meetings

<i>Public Hearing</i>	<i>Committee</i>		<i>Planning Commission</i>	
7-20-10	8-17-10	Text Change Committee – Recommended	7-27-10	Referred to Text Change Committee
	10-19-10	Special PC Meeting Text Change Committee – Recommended Denial	9-21-10 10-26-10	Special Evening Meeting <u>Action</u>

Attachments

1. Staff report
2. Summary
3. Draft Ordinance

Planning Commission Recommendation

<i>Recommendation</i>	<p>DENIAL of TC-4-10; and that the Stormwater Management Advisory Commission be directed to review the Action Items and Policies of the 2030 Comprehensive Plan related to floodplain management, evaluate alternate approaches and ensure that the full impacts of any future proposed changes have been fully analyzed.</p>
<i>Findings & Reasons</i>	<ol style="list-style-type: none"> 1. That the 2006 amendment to the floodprone area regulations (TC-22-04), limiting development to 50% of the floodplain with an exemption for lots less than ½-acre, represented a compromise between affected properties and the public benefit. The 2006 change in the regulations represented a significant departure from previous development potential of individual lots. However, working in good faith, the Task Force members representing the floodprone area properties “bought-in” to the proposed changes. Revising the regulations following this relatively recent community compromise will undermine public confidence in the negotiation process with the City. 2. That this proposal is also premature considering

	<p>incomplete mapping information on the Future Conditions Flood Hazard Areas and the lack of proof that the 2006 ordinance is not working.</p> <ol style="list-style-type: none"> 3. Restricting the future development of thousands of developed properties, even with the “grandfather” clause, and opportunity for a City Council variance will unnecessarily cause practical and economic hardships and personal difficulties. 4. That alternate approaches, like limiting development to low flow obstruction or other reasonable alternatives to the proposed ordinance that achieve the ordinance objectives with less impact to property owners were not considered. 5. Under the proposed text change, no development is allowed in the floodplain and in future conditions flood hazard areas without a variance from the City Council. This approach is very time consuming to both the applicant and the City Council, it is uncertain and it is expensive. 6. That prior to initiating changes to development regulations which significantly impact numerous property owners, the City should consider alternate approaches, ensure that the full impacts of proposed changes have been analyzed, that the community benefits of the proposed changes are clearly articulated and that a public notice and outreach program is undertaken prior to the scheduled public hearing.
<i>Motion and Vote</i>	<p>Motion: Mattox Second: Bartholomew</p> <p>In Favor: Bartholomew, Butler, Fleming, Harris Edmisten, Haq, Mattox, Mullins, Smith, Sterling Lewis</p>

This document is a true and accurate statement of the findings and recommendations of the Planning Commission. Approval of this document incorporates all of the findings of the attached Staff Report.

	10/26/10	
Planning Director	Date	Planning Commission Chairperson
		Date

Staff Coordinator: Greg Hallam: greg.hallam@raleighnc.gov



Zoning Staff Report – TC-4-10

Floodprone Area Regulations Text Change

Request

<i>Section Reference</i>	10-4008. Floodway, Floodway Fringe Areas and Future Conditions Flood Hazard Areas – Permitted Uses.
<i>Basic Information</i>	Amends the Code to limit land uses permitted locating within designated Floodway Fringe Areas and Future Conditions Flood Hazard Areas to those land uses permitted within the Floodway zone (surface parking, general farming and horticulture, recreational uses such as golf courses, driving ranges, play courts, greenways)
<i>PC Recommendation Deadline</i>	November 2, 2010

Comprehensive Plan Guidance

<i>Applicable Policies</i>	EP 2.2 – Environmentally Sensitive Development EP 2.3 – Open Space Preservation EP 3.2 – Neuse River Protection EP 3.3 – Water Supply Protection EP 3.7 – Preserving Watercourses EP 4.2 – Floodplain Conservation EP 4.3 – Development in the Floodplain EP 4.5 – Watercourse Protection EP 4.7 – No adverse Impact PU 3.10 – Water Quality Improvements
<i>Action Items</i>	EP 4.4 – Floodplain Regulation

Contact Information

<i>Staff Coordinator</i>	Greg Hallam: greg.hallam@raleighnc.gov ; 516.2636
--------------------------	--

History/Overview

The City's regulations classify Floodprone Areas as one of the following three hydrologic categories:

- **Floodway.** Floodway means that portion of channels of streams necessary to carry and discharge the waters of the base flood without increasing the water surface elevation of that flood more than one foot at any point.
- **Floodway fringe.** Floodway fringe is that portion of the floodprone area that would be inundated by the one per cent (1 percent) annual chance flood.
- **Future conditions flood hazard area.** Future conditions flood hazard area means the land area that would be inundated by the one per cent (1 percent) annual chance flood based on future conditions hydrology.

Currently, development within the floodway is highly regulated, only allowing uses that have low flow-obstructing characteristics. Allowable uses include surface parking, general farming and horticulture and recreational uses such as golf courses, driving ranges, play courts and greenways. Land uses allowed within the floodway fringe and future conditions flood hazard areas are governed by their respective zoning districts. However, development, defined as "bulk lot coverage", shall not exceed 50 percent of these areas. "Bulk lot coverage" is defined as:

"... the amount of net lot area within designated floodway fringe areas and future conditions flood hazard areas expressed in terms of a percentage that is covered by any obstruction restricting or displacing the flow of flood waters and any fill added to the lot after the application of this regulation."

In addition, lots less than -one-half-acre in size and existing prior to the application of the 50 percent limitation are exempt. The City Council may also approve a variance to the 50 percent limitation when unique circumstances exist such that strict adherence to the provisions will result in unnecessary hardship or create practical difficulties. The 50 percent limitation first became applicable on May 3, 2006 (TC-22-04). Prior to this date, the entirety of the floodway fringe area could be developed.

When development occurs within the floodway fringe or future conditions flood hazard area, the finished floor elevation of buildings are required to be constructed above the regulatory flood protection elevation or the buildings are required to be floodproofed. Floodproofing is not an option for residential dwellings, which are required to be constructed above the regulatory flood protection elevation.

TC-4-10 was initiated by the City's Stormwater Management Advisory Commission (SMAC). This text change proposes to limit development within the floodway fringe and future conditions flood

hazard areas to those uses permitted within designated floodways; uses that have low flow-obstructing characteristics such as surface parking, general farming and horticulture and recreational uses such as golf courses, driving ranges, play courts and greenways. In addition, the SMAC proposes to eliminate the current exemption for lots less than one-half-acre in size which were created prior to May 3, 2006, but retains the provision to allow the City Council to approve a variance when unique circumstances exist such that strict adherence to the provisions will result in unnecessary hardship or create practical difficulties.

Purpose and Need

Streams and rivers change course and flood through natural processes. Buildings located in floodplains are at high risk for flood damage. While some floodplains experience frequent flooding, others are affected only when there is a severe storm. It is a matter of when, not if, a property within a designated floodplain will sustain flood damage. While the term “100-year floodplain” may lead one to believe that in this area, floods happen only once every 100 years, it actually means a flood in this area has a 1 percent chance of being equaled or exceeded in any year. Another way to look at it: over a period of 30 years, a structure in the 100-year floodplain has a 26 percent chance of being flooded. In addition, limiting development within floodprone areas preserves natural habitat and water quality, both of which are vital to maintaining a healthy ecosystem.

The following is a list of policies associated with floodplain development, open space preservation and water quality, as identified in the City’s Comprehensive Plan.

EP 2.2 Environmentally Sensitive Development. Ensure Raleigh’s growth and land development practices are compatible with the City’s natural form, vegetation, topography, and water bodies and streams. This will decrease erosion, reduce stormwater run-off and flooding, improve water quality, protect wildlife habitat, and provide buffers and transitions between land uses.

EP 2.3 Open Space Preservation. Seek to identify all opportunities to conserve open space networks, mature existing tree stands, steep slopes, floodplains, priority wildlife habitats, and significant natural features as part of public and private development plans and targeted acquisition.

EP 3.2 Neuse River Protection. Protect and preserve the Neuse River watershed, primary channel, major tributaries, intermittent headwaters streams, floodplains, and topography to improve overall water quality for drinking, fish and wildlife habitat, and fishing, boating, and other recreational uses.

EP 3.3 Water Supply Protection. Protect major water supply overlay districts through open space conservation, community programs that promote tree coverage, floodplain preservation, and limits to impervious surface cover.

EP 3.7 Preserving Watercourses. Preserve the natural character of watercourses through greenway acquisition, floodprone area regulation, purchase of properties in Neuse River Buffer and floodprone areas, drainage corridor and buffer protection, and improved public and private design and construction practices.

EP 4.2 Floodplain Conservation. Development should be directed away from the 100-year floodplain.

EP 4.3 Development in the Floodplain. Pursue regulatory approaches that avoid the future expansion of the floodplain. Floodplain development should not abridge the natural role of floodplains to absorb water, recharge the groundwater and avoid flooding downstream.

EP 4.5 Watercourse Protection. Minimize encroachment into natural watercourse areas and preserve the natural character of watercourses to protect water quality and reduce the potential for flooding and erosion damage.

EP 4.7 No Adverse Impact. The City shall adopt the principles of No Adverse Impact (NAI) as outlined by the Association of State Floodplain Managers; NAI floodplain management takes place when the actions of one property owner are not allowed to adversely affect the rights of other property owners. Adverse effects or impacts can be measured in terms of increased flood peaks, increased flood stages, higher flood velocities, increased erosion and sedimentation, or other impacts the community considers important.

PU 3.10 Water Quality Improvements. Improve potable water quality through the preservation and restoration of natural landscape features such as lakes, floodplains, wetlands, and their buffers.

The following is a Comprehensive Plan Action Item concerning floodplain regulation. TC-4-10 implements most but not all of this action. It does not ensure that there will be no increase in natural runoff, as surface parking is a permitted use within the floodplain.

EP 4.4 Floodplain Regulations. Update City development regulations to prohibit fill and direct development away from the 100-year floodplain, and to ensure that any development and redevelopment in floodplain and flood fringe does not increase or decrease natural runoff and does not impede or direct natural water flow to adjacent properties.

Alternatives Considered

The Stormwater Management Advisory Commission (SMAC) did not propose an alternative. Therefore, the only alternative considered is a No Action alternative.

Scoping of Impacts

Potential adverse impacts of the proposed text change have been identified as follows:

1. A variance will be required to be issued by the City Council for unique circumstances applicable to a floodprone property which result in unnecessary hardship or create practical difficulties. Although this is a requirement under the current “50 percent floodplain development” regulation, further limiting fill and development within floodprone areas will most likely increase the number of properties experiencing hardships and practical difficulties during site development. Requiring City Council variance approval in order to develop one’s property may increase cost and

construction time as well as hamper the ability for a property owner to successfully market their property.

2. Eliminating the exemption for existing lots less than 1/2 acre in size would now require these properties, when experiencing practical difficulties from the regulations, to seek City Council approval of a variance. Requiring City Council variance approval in order to develop one's property may increase cost and construction time as well as hamper the ability for a property owner to successfully market their property.

The adverse impacts of taking no action (retaining the existing regulations) have been identified as follows:

1. Upholding the practice of allowing fill and building encroachments within floodprone areas will continue to adversely affect the capacity of the stream's channel and fringe areas, redirect velocities of water onto adjacent properties and result in an increase in flood levels. This could result in an increase in property damage and erosion while reducing water quality. In addition, floodplain development endangers the local habitat and ecosystems dependent on a system of healthy streams and rivers.

Impacts Summary

Adoption of Proposed Text Change

Adoption of TC-4-10 would limit development within the floodway fringe and future conditions flood hazard areas to those uses permitted within designated floodways; uses that have low flow-obstructing characteristics such as surface parking, general farming and horticulture and recreational uses such as golf courses, driving ranges, play courts and greenways. This would most likely result in an increased number of lots which may experience practical difficulties or hardships based on the magnitude of their floodprone area designation, and would therefore need to appeal to the City Council for relief.

No action

Under the "no action" alternative, property owners would continue to be able to fully develop 50 percent of that portion of their property located within a floodprone area designation (floodway fringe and/or future conditions flood hazard area); and existing lots less than 1/2-acre in size could develop 100 percent of that portion of their property located within a floodprone area designation. Continuing to allow intensive development within designated flood zones will result in greater property damage due to flooding, increased stream/river bank erosion, reduced water quality, loss of habitat and damage to the natural ecosystem.

04/20/10

ORDINANCE NO. (2010) TC TC- -10

AN ORDINANCE TO REVISE THE CITY’S FLOODPLAIN AREA REGULATIONS AND PLANNING AND DEVELOPMENT REGULATIONS

WHEREAS, The Raleigh City Council find that the existing Floodplain Area Regulations should be strengthened.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF RALEIGH, NORTH CAROLINA that:

Section 1. Raleigh City Code section 10-4008 (a) is hereby amended to remove “Subject to subsection (c) below”.

Section 2. Raleigh City Code section 10-4008 (a)(2) is hereby removed

Section 3. Raleigh City Code section 10-4008 (b) is hereby removed

Section 4. Raleigh City Code sections 10-4008 (c)(1-3)are hereby removed

Section 5. Raleigh City Code section 10-4008 (c)(4)(b)(5) is hereby removed

Section 6. Raleigh City Code section 10-4009 is hereby amended to insert at the beginning of the section “Any addition of fill or bulk lot coverage is prohibited”.

Section 7. Raleigh City Code section 10-4009 (e) is hereby amended to replace the existing language, “Appeals from decisions of the City Engineer shall be to the City Council; and”, and replace it with the following;

“Notwithstanding the preceding exceptions, the City Council may approve a variance to the limitation if the following conditions are met:

- i. There are unique circumstances applicable to the site such that strict adherence to the provisions of the chapter will result in unnecessary hardship or create practical difficulties; and
- ii. The variance is in harmony with the general purpose and intent of this chapter; and
- iii. In granting this variance, public safety and welfare has been assured, and substantial justice has been done.

A written request in this subsection for a variance shall be submitted to the City Clerk and shall state the specific variance sought, the justification for the variance, and what measures will be taken to insure the requirements of this chapter have been met to the maximum extent

practicable. It shall include descriptions, drawings, calculations and any other information that is necessary to evaluate the proposed variance as determined by the Floodplain Administrator.”

Section 8. Raleigh City Code section 10-4009 is hereby amended to add a new subsection (f) that states “The City Council shall allow development of the Floodway Fringe or future conditions flood hazard areas whenever it determines that the extent of the development limit will deprive the land owner of reasonable use of their property.” and re-letters existing subsection (f) accordingly.

Section 9. All laws and clauses of laws in conflict herewith are hereby repealed to the extent of said conflict.

Section 10. If this ordinance or application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of the ordinance which can be given separate effect and to the end the provisions of this ordinance are declared to be severable.

Section 11. This ordinance has been adopted following a duly advertised joint public hearing of the Raleigh City Council and the Stormwater Management Advisory Commission following a recommendation of the Stormwater Management Advisory Commission.

Section 12. This ordinance has been provided to the North Carolina Capital Commission as required by law.

Section 13. This ordinance shall be enforced by law as provided in N.C.G.S. 160A-175 or as provided in the Raleigh City Code. All criminal sanctions shall be the maximum allowed by law notwithstanding the fifty dollar limit in G.S. 14-4(a) or similar limitations.

Section 14. This ordinance shall become effective **XXX** following its adoption.

ADOPTED:
EFFECTIVE:
DISTRIBUTION:

Sec. 10-4008. FLOODWAY, FLOODWAY FRINGE AREAS AND FUTURE CONDITIONS FLOOD HAZARD AREAS--PERMITTED USES.

The following uses shall be permitted within Floodway fringe areas and future conditions flood hazard areas to the extent that they are not otherwise prohibited by this or any other law or ordinance:

(a) ~~Subject to subsection (c) below,~~ uses permitted below the regulatory flood protection elevation:

(1) Uses permitted and regulated in floodways;

~~(2) Nonresidential structures and residential accessory structures which comply with §10-6037(b)(2) or (3), subject to subsection (c) below;~~

(3) Underground storage and structure foundations and supports which are watertight and substantially impermeable to the passage of water and are designed to withstand the flood depths, pressure, velocities, impact and uplift forces associated with the base flood or future conditions flood at the location of the structure.

~~(b) Subject to subsection (c) below, uses which are permitted above the regulatory flood protection elevation are:-~~

~~(1) Structures which comply with Code §10-6037;~~

~~(2) Manufactured homes and additions there to which comply with Code §10-6037;~~

~~(3) Structures constructed on fill so that the lowest floor, including the basements, are above the regulatory flood protection elevation provided the top of the fill shall be at a point no lower than one (1) foot below the regulatory flood protection elevation for the particular area and shall extend in all directions, at such elevation, at least fifteen (15) feet beyond the limits of any structure or building erected thereon;~~

~~(4) Open storage of materials subject to floating away during a flood provided said storage is placed on fill at least one (1) foot above the regulatory flood protection elevation.—~~

~~(c) Limits of Development. The Bulk lot coverage of any lot shall not exceed more than fifty per cent (50%) of that portion of the Floodway fringe or future conditions flood hazard areas on that lot with the following exceptions:-~~

~~(1) Uses permitted in floodways.—~~

~~(2) Ground level loading areas, parking areas, heliports and other similar ground level uses.—~~

~~(3) Any lot one-half (1/2) acre or less in size which was either recorded at the time of application of this regulation* or which was approved for recordation prior to the application of this regulation and which has not sunsetted*.~~

(4) No existing or approved structure, for which a building permit has been issued prior to the effective date of this text change, shall be considered a nonconforming structure as defined in §10-2046 of this Code . In the event of damage to such a structure by flood or other casualty requiring a substantial improvement of said structure, the structure may be repaired or rebuilt with:

a. An administrative approval by the Floodplain Administrator, if all of the following are met:

1. The land use existing at the time of the flood or other casualty remains the same; and
2. The area of the footprint of the structure does not increase; and
3. There is no rise in the Base Flood Elevation, *there is no increase of water velocities onto impacted structures and there is no lateral change to the floodplain* or, if there is

any rise in the Base Flood Elevation, as determined by a Flood Study identifying upstream and downstream structures that will be impacted, it will:

- (i) not raise the levels of the base flood or future conditions flood onto impacted structures, and
 - (ii) not redirect velocities of water onto impacted structures.
- b. A variance by the City Council, if all of the following are met:
1. The land use existing at the time of the flood or other casualty remains the same; and
 2. The area of the footprint of the structure does not increase; and
 3. There are unique circumstances applicable to the site such that strict adherence to the provisions of the chapter will result in unnecessary hardship or create practical difficulties; and
 4. The variance granted is the minimum necessary to maintain the land use.

A written request under subsection (b) above for a variance shall be submitted to the City Clerk and shall state the specific variance sought, the justification for the variance, and what measures will be taken to insure the requirements of this chapter have been met to the maximum extent practicable. It shall include descriptions, drawings, calculations and any other information that is necessary to evaluate the proposed variance as determined by the Floodplain Administrator.

~~(5) An administrative approval by the Floodplain Administrator for any redevelopment that does not increase the flood elevation and that decreases the bulk of existing building (s) or structure(s) below the base flood or future conditions flood level by at least twenty five per cent (25%) of the portion exceeding fifty per cent (50%) of the Floodway Fringe or future conditions flood hazard areas. Any additional fill or material being added as a part of the redevelopment shall be included for calculation of the bulk of the proposed redevelopment. For example, if structure(s) on a property cover eighty per cent (80%) of the Floodway Fringe or future conditions flood hazard areas, the proposed redevelopment of the site must reduce the bulk of the structure(s) to no more than seventy two and one half per cent (72.5%) of the site in order to qualify for this administrative approval. A written request for a variance shall be submitted to the Floodplain Administrator. It shall include descriptions, drawings, calculations and any other information that is necessary to evaluate the proposed exception as determined by the Floodplain Administrator.~~

~~(6) Notwithstanding the preceding exceptions, the City Council may approve a variance to the fifty per cent (50%) limitation if the following conditions are met:~~

- ~~a. There are unique circumstances applicable to the site such that strict adherence to the provisions of the chapter will result in unnecessary hardship or create practical difficulties; and~~
- ~~b. The variance is in harmony with the general purpose and intent of this chapter; and~~
- ~~c. In granting this variance, public safety and welfare has been assured, and substantial justice has been done.~~

~~A written request in this subsection for a variance shall be submitted to the City Clerk and shall state the specific variance sought, the justification for the variance, and what measures will be taken to insure the requirements of this chapter have been met to the maximum extent practicable. It shall include descriptions, drawings, calculations and any other information that is necessary to evaluate the proposed variance as determined by the Floodplain Administrator.~~

~~(7) The City Council shall allow development in excess of the fifty per cent (50%) limitation of the Floodway Fringe or future conditions flood hazard areas whenever it determines that the extent of the development limit will deprive the land owner of reasonable use of their property.~~

(Ord. No. 1978-872-TC-88, §7, 8-15-78; Ord. No. 1982-849-TC-157, §10, 2-16-82; Ord. No. 1987-932-TC-282, §7, 2-17-87; Ord. No. 2006-953-TC-279, §5, TC-22-04, 1-3-06; Ord. No. 2006-999-TC-282, §§20--24, TC-4-06, 4-18-06; Ord. No. 2006-134-TC-296, §§10--12, TC-10-06, 11-21-06)

*Editor's Note: This regulation first became applicable on May 3, 2006, Ordinance No. (2005) 953 TC 279, TC-22-04.

Cross references:Flood permits, applications for permits, and plans and specifications, §§10-6033(6), 10-6034; limitations on issuance of building permits for construction in floodprone areas §10-6037; manufactured homes in floodprone areas , §10-6172.

Sec. 10-4009. SAME--PROHIBITED USES.

Any addition of fill or bulk lot coverage is prohibited.

Any use, structure as defined in the North Carolina State Building Code, or encroachment, including fill, which adversely affects the capacity of channels, floodways or drainage facilities or systems is prohibited. The storage or processing of acetone, ammonia, benzene, calcium carbide, carbon disulfide, celluloid, chlorine, hydrochloric acid, hydrocyanic acid, magnesium, nitric acid, oxides of nitrogen, phosphorous, potassium, sodium, sulphur, or any other item which in time of flooding could be caustic is prohibited. New solid waste disposal facilities, hazardous waste management facilities and salvage yards , are prohibited in the floodway fringe areas and/or future conditions flood hazards areas.

In flood hazard soils areas of watercourses that drain areas less than one square mile may use, structure as defined in the North Carolina State Building Code, or encroachment, including fill, which is located within ninety (90) per cent of the distance of the outer limits of the flood hazard soils (as measured from either side of the center line of the stream channel, or the low point when there is no stream channel, or the midpoint, when there is no stream channel or low point) and which increases the elevation of the base flood or future conditions flood at any point by more than one-half foot, is prohibited. Provided nothing in this paragraph shall prevent a landowner from voluntarily redelineating flood hazard soils areas of water courses which drain less than one square mile to accommodate more than a one-half foot rise of the base flood or future conditions flood if:

- (a) All of the more than one-half-foot flood rise for the base flood or future conditions flood remains on the property of petitioner;
- (b) The establishment and documentation of field conditions used in the redelineation are based on information supplied by a licensed registered land surveyor and all calculations are made and certified by a licensed professional engineer;
- (c) Any sanitary sewer manholes in an area of increased depth are floodproofed by the petitioner;
- (d) The petitioner notifies by certified or registered mail, return receipt requested, all adjoining property owners, and tenants, including the petitioning property . Such notice shall explain the proposed redelineation, and it shall inform such persons that they

can appeal the proposed redelineation to the City Engineer within ten (10) days after receipt of the letter;

~~(e) Appeals from decisions of the City Engineer shall be to the City Council; and~~

(e) Notwithstanding the preceding exceptions, the City Council may approve a variance to the limitation if the following conditions are met:

i. There are unique circumstances applicable to the site such that strict adherence to the provisions of the chapter will result in unnecessary hardship or create practical difficulties; and

ii. The variance is in harmony with the general purpose and intent of this chapter; and

iii. In granting this variance, public safety and welfare has been assured, and substantial justice has been done.

A written request in this subsection for a variance shall be submitted to the City Clerk and shall state the specific variance sought, the justification for the variance, and what measures will be taken to insure the requirements of this chapter have been met to the maximum extent practicable. It shall include descriptions, drawings, calculations and any other information that is necessary to evaluate the proposed variance as determined by the Floodplain Administrator.

(f) The City Council shall allow development of the Floodway Fringe or future conditions flood hazard areas whenever it determines that the extent of the development limit will deprive the land owner of reasonable use of their property.

~~(fg)~~ Upon the approval of the redelineation, by the City, the new delineation is filed with the Wake County Clerk of the Superior Court and with the Register of Deeds of Wake County, and the new delineation is recorded with the Wake County Registry. Recorded delineations shall mark the additional lands subject to flooding as "flood storage areas."

(Ord. No. 1978-872-TC-88, §7, 8-15-78; Ord. No. 1979-47, 3-22-79; Ord. No. 1982-849-TC-157, §11, 2-16-82; Ord. No. 2006-134-TC-296, §§13--16, TC-10-06, 11-21-06)