

**NATIONAL FLOOD INSURANCE
FLOOD DAMAGE PREVENTION ORDINANCE
OF
CALDWELL COUNTY**



**ADOPTED OCTOBER 4, 1993
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TABLE OF CONTENTS

Article 1:	Statutory Authorization, Findings of Fact, Purpose and Objectives	Page 3
Article 2:	Definitions	Page 4
Article 3:	General Purpose	Page 10
Article 4:	Administration	Page 11
Article 5:	Provisions For Flood Hazard Reduction	Page 17
Article 6:	Legal Status Provisions	Page 24

NATIONAL FLOOD INSURANCE
FLOOD DAMAGE PREVENTION ORDINANCE

Regular Phase

**ARTICLE 1: STATUTORY AUTHORIZATION, FINDINGS OF FACT,
PURPOSE AND OBJECTIVES**

Section A: Statutory Authorization

The Legislature of the State of North Carolina has Part 6, Article 21 Chapter 143; Parts, 3, & 4 of Article 18 of Chapter 153A; and Article 6 of Chapter 153A of the North Carolina General Statutes, delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the County Commissioners of Caldwell County, North Carolina do ordain as follows:

Section B: Findings of Fact

- 1) The flood hazard areas of Caldwell County are subject to periodic inundation which results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures of flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

- 2) These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods are hazardous to other lands which are inadequately elevated, flood proofed, or otherwise unprotected from flood damages.

Section C: Statement of Purpose

It is the purpose of this ordinance to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- 1) restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

- 2) require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- 3) control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters;
- 4) control filling, grading, dredging, and other development which may increase erosion or flood damage; and,
- 5) prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

Section D: Objectives

The objectives of this ordinance are:

- 1) to protect human life and health;
- 2) to minimize expenditure of public money for costly flood control projects;
- 3) to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- 4) to minimize prolonged business interruptions;
- 5) to minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in floodplains;
- 6) to help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize flood bright areas; and,
- 7) to insure that potential home buyers are notified that property is in a flood area.

ARTICLE 2: DEFINITIONS

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application.

Accessory Structure:

means structures which are located on the same parcel of property as the principle structure and the use of which is incidental to the use of the principal structure. Garages, carports and storage sheds are common urban accessory structures. Pole barns, hay sheds and the like qualify as accessory structures on farms, and may or may not be located on the same parcel as the farm dwelling or shop building.

Addition (to an existing building):

means an extension or increase in the floor area or height of a building or structure. Additions to existing buildings shall comply with the requirements for new construction, unless the addition, renovation or reconstruction to any building, that was constructed prior to the initial Flood Insurance Study for that area, and the addition, renovation or reconstruction does not equal 50% of the present market value of the structure. Where a fire wall is provided between the addition and the existing building, the addition(s) shall be considered a separate building and must comply with the standards for new construction.

Appeal:

means a request from a review of the local administrator's interpretation of any provision of this ordinance.

Area of shallow flooding:

means a designed AO or VO Zone on a community's flood insurance rate map (FIRM) with base flood depths from one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

Area of special flood hazard:

is the land in the floodplain within a community subject to a one percent or greater chance of being equaled or exceeded or exceeded in any given year.

Base flood:

means the flood having a one percent chance of being equaled or exceeded in any given year.

Basement:

means that lowest level or story which has its floor sub grade on all sides.

Breakaway wall:

means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system. A breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. A wall with loading resistance of more than 20 pounds per square foot requires a professional engineer or architect's certificate.

Building:

means any structure built for support, shelter, or enclosure for any occupancy or storage.

Development:

means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or material.

Elevated building:

means a non-basement building (a) built, in the case of a building in Zones A1-A30, AE, A, A99, AO, AH, B, C, or X to have the top of the elevated floor, above the ground means of pilings, columns (post and piers), shear walls parallel to the flow of water and, (b) adequately anchored so as not to impair the structural integrity of the building during a flood up to the magnitude of the base flood. In the case of Zone A1-A30, AE, A, A99, AO, AH, B, C and X, "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters.

Existing manufactured home park or manufactured home subdivision:

means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including , at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before May 15, 1978.

Expansion to an existing manufactured home park or subdivision:

means the preparation of the additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete slabs)>

Flood or Flooding:

means a general and temporary condition of partial or complete inundation of normally dry land areas from:

1. the overflow of inland or tidal waters; and,
2. the unusual and rapid accumulation of runoff or surface waters from any source.

Flood Hazard Bound Map (FHBM):

means an official map of a community, on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

Flood Insurance Rate Map (FIRM):

means an official map of a community, on which the Federal Emergency Management Agency. The report contains flood profiles, as well as the Flood Boundary Floodway Map and the water surface elevation of the base flood.

Flood Insurance Study:

is the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the Flood Boundary Floodway Map and the water surface elevation of the base flood.

Floodway:

means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

Floor:

means the top surface of an enclosed area in a building (including basement), i.e., top of slab in concrete slab construction or top of wood frame construction. The term does not include the floor of a garage used solely for parking vehicles.

Functionally dependent facility:

means a facility which cannot be used for its intended purpose unless it is located or carried out in for the loading and unloading of cargo or passengers, shipbuilding, ship repair, or seafood processing facilities. The term does not include long-term storage, manufacture, sales, or service facilities.

Highest Adjacent Grade:

means the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of the structure.

Historic Structure:

means any structure that is: (a) listed individually in the National Register of Historic Places (a listing maintained by the US Department of Interior) or preliminarily determined by the Secretary of Interior as meeting the requirements for individual listing on the Nation Register; (b) certified or preliminarily determined by the Secretary of Interior as contributing to the historical significance of a contributing to the historical significance of a registered historic district; (c) individually listed on a State inventory of historic places; (d) individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified (1) by an approved state program as determined by the Secretary of Interior, or (2) directly by the Secretary of Interior in states without approved programs.

Levee:

means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

Levee System:

means flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest Floor:

means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area is not considered a building's lowest floor provided that such an enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

Manufactured Home:

means a structure, transportable in one or more sections, which is built on a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

Manufactured home park or subdivision:

means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Mean Sea Level:

means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For purposes of this ordinance, the term is synonymous with National Geodetic Vertical Datum (NGVD).

National Geodetic Vertical Datum (NGVD):

as corrected in 1929 is a vertical control used as a reference for establishing varying elevations within the floodplain.

New Construction:

means structures for which the "start of construction" commenced on or after the effective date of this ordinance and includes any subsequent improvements to such structures.

New Manufactured home park or subdivision:

means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed

(including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete slabs) is completed on or after May 15, 1978.

Nonconforming building or use:

means any legally existing building or use which fails to comply with the provisions of this ordinance.

Recreational vehicle:

means a vehicle which is: (a) built on a single chassis; (b) 400 square feet or less when measured at the largest horizontal projection; (c) designed to be self-propelled or permanently towable by a light duty truck; (d) designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.

Reference feature:

is the receding edge of a bluff or eroding frontal dune or, if such a feature is not present, the normal highwater line or the seaward line of permanent vegetation if highwater line cannot be identified.

Remedy a violation:

means to bring the structure or other development into compliance with State or local floodplain management regulations, or if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing Federal financial exposure with regard to the structure or other development.

Start of construction:

(for other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L. 97-348), includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include excavation for a basement, footings, piers or foundations, or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

Structure:

means, for floodplain management purposes, a walled and roofed building, a manufactured home, including a gas or liquid storage tank, or other man-made facilities or infrastructures that are principally above ground.

Substantial Damage:

means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. See definition of “substantial improvement”.

Substantial improvement:

means any repair, reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent 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: (1) project of improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or (2) any alteration of a historic structure, provided that the alteration will not preclude the structure’s continued designation as a historic structure.

Substantially improved existing manufactured home park or subdivision:

means where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equal or exceed 50 percent of the value of the streets, utilities and pads before the repair, reconstruction, or improvement commenced.

Variance:

is a grant of relief to a person from the requirements of this ordinance which permits construction in a manner otherwise prohibited by this ordinance where specific enforcement would result in unnecessary hardship.

Violation:

means the failure of a structure or other development to be fully compliant with the community’s floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in Articles 4 and 5 is presumed to be in violation until such time as that documentation is provided.

Zone of imminent collapse:

means an area subject to erosion adjacent to the shoreline of an ocean, bay or lake and within a distance equal to 10 feet plus 5 times that average annual long-term erosion rate for the site, measured from the reference feature.

ARTICLE 3 GENERAL PROVISIONS

Section A. Lands To Which This Ordinance Applies

This ordinance shall apply to all areas of special flood hazard within the jurisdiction of Caldwell County.

Section B. Basis For Establishing The Areas Of Special Flood Hazard

The areas of special flood hazard identified by the Federal Emergency Management Agency in its Flood Insurance Rate Maps, dated August 16, 1988, with accompanying maps and other supporting data, and any revision thereto are adopted by reference and declared to be a part of this ordinance.

Section C. Establishment of Development Permit

A development permit shall be required in conformance with the provisions of this ordinance prior to the commencement of any development activities.

Section D. Compliance

No structure or land shall hereafter be located, extended, converted, or structurally altered without full compliance with the terms of this ordinance and other applicable regulations.

Section E. Abrogation and Greater Restrictions

This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

Section F. Interpretation

In the interpretation and application of this ordinance all provisions shall be: (1) considered as minimum requirements; (2) liberally construed in favor of the governing body; and, (3) deemed neither to limit nor repeal any other powers granted under state statutes.

Section G. Warning and Disclaimer of Liability

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply

that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of Caldwell County or by any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

Section H. Penalties for Violation

Violation of the provisions of this ordinance or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$50.00 or imprisoned for not more than 30 days, or both. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the Caldwell County from taking such other lawful action as is necessary to prevent or remedy any violation.

ARTICLE 4 ADMINISTRATION

Section A. Designation of Local Administration

The Planning Director is hereby appointed to administer and implement the provisions of this ordinance.

Section B. Development Permit And Certification Requirements

Application for a development permit shall be made to the local administrator on forms furnished by him or her prior to any development activities. The development permit may include, but not be limited to, plans in duplicate drawn to scale showing: the nature, location, dimensions, and elevations of the area in question; existing or proposed structures; and the location of fill materials, storage areas, and drainage facilities. Specifically, the following information is required:

1. A plot plan that shows the 100 year floodplain contour or a statement that the entire lot is within the floodplain must be provided by the development permit applicant when the lot is within or appears to be within the floodplain as mapped by the Federal Emergency Management Agency or the floodplain identified pursuant to either Article 4, Section C(10) or Article 5 Sections C and D. The plot plan must be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same.
2. The plot plan required by Article 4, Section B(1) must show the floodway, if any, as identified by the Federal Emergency Management Agency or the

floodway identified pursuant to either Article 4, Section C(10) or Article 5, Section C.

3. Where base flood elevation data is provided in accordance with Article 3, Section B or Article 4, Section C(10), the application for a Development Permit within the Zone A on the Flood Insurance Rate Map shall show:
 - a. the elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures, and
 - b. if the structure has been flood proofed in accordance with Article 5, Section B(2), the elevation (in relation to mean sea level) to which the structure was flood proofed.
4. Where the base flood elevation data is not provided, the application for a development permit must show construction of the lowest floor at least 2 feet above the highest adjacent grade.
5. Where any watercourse will be altered or relocated as a result of proposed development, the application for a development permit shall include: 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 showing the location of the proposed watercourse alteration or relocation.
6. When a structure is flood-proofed, the applicant shall provide a certificate from a registered professional engineer or architect that the non-residential flood-proofed structure meets the flood-proofing criteria in Article 5, Section B(2).
7. A floor elevation or flood-proofing certification is required after the lowest floor is completed. Within twenty-one (21) calendar days of establishment of the lowest floor elevation, or flood-proofed elevation, whichever is applicable, as built, in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. When flood-proofing is utilized for a particular building, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. Any work done within the twenty-one (21) day calendar period and prior to submission of the certification shall be at the permit holder's risk. The local administrator shall review the floor elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit

the survey or failure to make said corrections required hereby shall be cause to issue a stop work order for the project.

Section C. Duties and Responsibilities of the Local Administrator

Duties of the local administrator shall include, but not be limited to:

1. Review all development permits to assure that the requirements of this ordinance have been satisfied.
2. Advise permittee that additional Federal or State permits may be required, and if specific Federal or State permits are known, require that copies of such permits be provided and maintained on file with the development permit.
3. Notify adjacent communities and the North Carolina Department of Crime Control and Public Safety, Division of Emergency Management, State Coordinator for the National Flood Insurance Program prior to any alteration or relocation of a water-course, and submit evidence of such notification to the Federal Emergency Management Agency.
4. Assure that maintenance is provided within the altered or relocation portion of said watercourse so that the flood-carrying capacity is not diminished.
5. Prevent encroachments within floodways unless the certification and flood hazard reduction provisions of Article 5 are met.
6. Obtain actual elevation (in relation to mean sea level) or the lowest floor (including basement) of all new or substantially improved structures, in accordance with Article 4, Section B(7).
7. Obtain the actual elevation (in relation to mean sea level) to which the new or substantially improved structures have been flood-proofed, in accordance with Article 4, Section B(7).
8. When flood-proofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with Article 5, Section B(2).
9. Where interpretation is needed as to the exact locations of boundaries of the area of special flood hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.

10. When base flood elevation data or floodway data has not been provided in accordance with Article 3, Section B, obtain, review, and reasonably utilize any base flood elevation data and floodway data available from a Federal, State, or other source, including data developed pursuant to Article 5, Section D(4), in order to administer the provisions of this ordinance.
11. When the exact location of boundaries of the areas special flood hazards conflict with the current, natural topography information at the site the property owner may apply and be approved for a Letter of Map Amendment (LOMA) by FEMA. A copy of the Letter of Map Amendment issued from FEMA will be maintained by the local administrator in the permit file.
12. Make on-site inspections of projects in accordance with Article 4, Section D.
13. Serve notices of violations, issue stop-work orders, revoke permits and take corrective actions in accordance with Article 4, Section D.
14. Maintain all records pertaining to the administration of this ordinance and make these records available for public inspection.

Section D. Administrative Procedures

1. **Inspections of Work in Progress:** As the work pursuant to a permit progresses, the local administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of the local ordinance and the terms of the permit. In exercising this power, the administrator has a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction at any reasonable hour for the purpose of Inspection or other enforcement action.
2. **Stop-Work Orders:** Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this ordinance, the administrator may order the work to be immediately stopped. the stop-work order shall state the specific work to be stopped, the specific reasons for the stoppage, and the conditions under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor.
3. **Revocation of Permits:** The local administrator may revoke and require the return of the development permit by notifying the permit holder in writing stating the reason for the revocation. Permits shall be revoked for

many substantial departure from the approved application, plans, or specifications; for refusal or failure to comply with the requirements of State or local laws; or for false statements or misrepresentations made in securing the permit. Any permit mistakenly issued in violation of an applicable State or local law may also be revoked.

4. **Periodic Inspections:** The local administrator and each member of his inspections department shall have a right, upon presentations of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.
5. **Violations to be Corrected:** When the local administrator finds violations of applicable State and local laws, it shall be his duty to notify the owner or occupant or occupant shall immediately remedy each of the violations of laws in the property he owns.
6. **Actions in Event of Failure to Take Corrective Action:** If the owner of a building or property shall fail to take prompt corrective action, the administrator shall give him written notice, by certified or registered mail to his last known address or by personal service,
 - a. that the building or property is in violation of the Flood Damage Prevention Ordinance;
 - b. that a hearing will be held before the local administrator at a designated place and time, not later than 10 days after the date of the notice, at which time the owner shall be entitled to be heard in person or by counsel and to present arguments and evidence pertaining to the matter; and,
 - c. that following the hearing, the local administrator may issue such to alter, vacate, or demolish the building; or to remove fill as appears appropriate.
7. **Order to Take Corrective Action:** If, upon a hearing held pursuant to the the notice prescribed above, the administrator shall find that the building or development is in violation of the Flood Damage Prevention Ordinance, he shall make an order in writing to the owner, requiring the owner to remedy the violation within such period, not less than 60 days, the administrator may prescribe; provided that where the administrator finds that there is imminent danger to life or other property, the may order corrective action be taken in such lesser period as may be feasible.
8. **Appeal:** Any owner who has received an order to take corrective action may appeal in writing to the administrator and the clerk within 10 days

following issuance of the final order. In the absence of an appeal, the order of the administrator shall be final. The local governing body shall hear an appeal within a reasonable time and may affirm, modify and affirm, or leave the order.

9. Failure to Comply with Order: If the owner of a building or property fails to comply with an order to take corrective action from which no appeal has been taken, or fails to comply with an order of the governing body following an appeal, he shall be guilty of a misdemeanor and shall be punished in the discretion of the court.

Section E. Variance Procedures

1. The Planning Board as established by the County Commissioners shall hear and decide requests for variances from the requirements of this ordinance.
2. Any person aggrieved by the decision of the appeal board or any taxpayer may appeal such decision to the Court, as provided in Chapter 7A of the North Carolina General Statutes.
3. Variances may be issued for the repair or rehabilitation of historic structures upon the determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
4. In passing upon such applications, the appeal board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and:
 - a. the danger that materials may be swept onto other lands to the injury of others;
 - b. the danger to life and property due to flooding or erosion damage;
 - c. the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - d. the importance of the services provided by the proposed facility to the community;
 - e. the necessity to the facility of a waterfront location, where applicable;
 - f. the availability of alternative locations, not subject to flooding or

- erosion damage, for the proposed use;
- g. the compatibility of the proposed use with existing and anticipated development;
 - h. the relationship of the proposed use to the comprehensive plan and floodplain management program for that area.
 - i. the safety of access to the property in times of flood for ordinary and emergency vehicles;
 - j. the expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,
 - k. the costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.
5. The findings listed above shall be submitted to the appeal board, in writing, and included in the application for a variance.
 6. Upon consideration of the factors listed above and the purposes of this ordinance, the appeal board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.
 7. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
 8. Conditions for Variances:
 - a. Variances may not be issued when the variance will make the structure in violation of other Federal, State, or local laws, regulations, or ordinances.
 - b. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - c. Variances shall only be issued upon (I) a showing of good and sufficient cause; (II) a determination that failure to grant the variance would result in exceptional hardship; and, (III) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on

or victimization of the public, or conflict with existing local laws or ordinances.

- d. Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and a written statement that the cost of flood insurance will be commensurate with the risk resulting from the reduced lowest flood elevation. Such notifications shall be maintained with a record of all variance actions.
- e. The local administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.

ARTICLE 5 PROVISIONS FOR FLOOD HAZARD REDUCTION

Section A. General Standards

In all areas of special flood hazard the following provisions are required:

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure;
2. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
3. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damages;
4. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
5. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
6. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;
7. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding; and,
8. Any alteration, repair, reconstruction or improvements to a structure

which is in compliance with the provisions of this ordinance, shall meet the requirements of “new construction” as contained in this ordinance.

9. **Non-Conforming Buildings or Uses.** Non-conforming buildings or uses may not be enlarged, replaced, or rebuilt unless such enlargement or reconstruction accomplished in conformance with the provisions of this ordinance. Provided, however, nothing in this ordinance shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this ordinance and located totally or partially within the Floodway Zone, provided that the bulk of the building or structure below base flood elevation in the Floodway Zone is not increased and provided that such repair, reconstruction, or replacement meets all of the other requirements of this ordinance.

Section B. Specific Standards

In all areas of special flood hazard where base flood elevation data has been provided, as is set forth in Article 3, Section B or Article 4, Section C(10), the following provisions are required:

1. **Residential Construction:** New construction or substantial improvement of any residential structure (including manufactured homes) shall have the lowest floor, including basement, elevated no lower than one (1) foot above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of flood waters shall be provided.
2. **Non-Residential Construction.** New construction or substantial improvement of any commercial, industrial, or non-residential structure (including manufactured homes) shall have the lowest floor, including basement, elevated no lower than one (1) foot above the level of the base flood elevation. Structures located in A-Zones may be flood-proofed in lieu of elevation provided that all areas of the structure below the required elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in Article 4, Section B(7).
3. **Manufactured Homes.**
 - a. Manufactured homes that are placed or substantially improved on sites (I) outside a manufactured home park or subdivision; (II) in a new manufactured home park or subdivision; (III) in an expansion to an existing manufactured home park or subdivision on which a

manufactured home incurred “substantial damage” as a result of flood, must be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated no lower than one (1) foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

- b. Manufactured homes that are to be placed or substantially improved on sites in an existing manufactured home park or subdivision that are not subject to the provisions of Article V, Section B(3a) of this ordinance must be elevated so that the lowest floor of the manufactured home is elevated not lower than one (1) foot above the base flood elevation, and be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement.
 - c. Manufactured home shall be anchored to prevent flotation, collapse, or lateral movement. For the purpose of this requirement, manufactured homes must be anchored to resist flotation, collapse, or lateral movement in accordance with the Regulations for Mobile Homes and modular Housing adopted by the Commissioner of Insurance pursuant to NCGS 143.143.15. Additionally, when the elevation would be met by an elevation of the class at least 36 inches or less above the grad at the sight, the chassis shall be supported by reinforced piers or other foundation elements of at least equivalent strength. When the elevation of chassis is above 36 inches in height an engineering certification is required.
 - d. An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivisions located within flood prone areas. This plan shall be filed with and approved by the local administrator and the local Emergency Management Coordinator.
4. Recreation Vehicles. A recreational vehicle is ready for highway use if it is on wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions. Recreational vehicles placed on sites shall either:
- a. be on site for fewer than 180 consecutive days;
 - b. be fully licensed and ready for highway use; or

- c. meet the requirements of Article 4, Section B and Article 5, Sections A and B(3).
5. Elevated Buildings. New construction or substantial improvements of elevated buildings that include fully enclosed areas that are usable solely for the parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to preclude finished living space and be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood waters.
- a. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:
 - (i) Provide a minimum of two openings have a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
 - (ii) The bottom of all openings shall be no higher than one foot above grade; and,
 - (iii) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.
 - b. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator).
 - c. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms, except to enclose storage areas.
6. Temporary Structures. Prior to the issuance of a development permit, for a temporary structure, the following requirements must be met:
- a. All applicants must submit to the local administrator prior to the issuance of the development permit a plan for the removal of such structure(s) in the event of a hurricane or flash flood warning notification. The plan must include the following information:
 - (i) a specified time period for which the temporary use will be permitted;

- (ii) the name, address and phone number of the individual responsible for the removal of the temporary structures;
 - (iii) the time frame prior to the event at which a structure will be removed (i.e. minimum 72 hours before landfall of a hurricane or immediately upon flood warning notification);
 - (iv) a copy of the contract or other suitable instrument with a with a trucking company to insure the availability of removal equipment when needed; and
 - (v) designation, accompanied by documentation, of a location outside the floodplain to which the temporary structure will be moved.
 - b. The above information shall be submitted in writing to the local administrator for review and written approval.
7. Accessory Structure. When accessory structures (sheds, detached garages, etc...) with a value of \$3,000 or less, are to be placed in the floodplain the following criteria shall be met:
- a. Accessory structures shall not be used for human habitation (including work, sleeping, living, cooking or restroom areas);
 - b. Accessory structures shall be designed to have low flood damage potential;
 - c. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;
 - d. Accessory structures shall be firmly anchored in accordance with Article 5, Section A(1);
 - e. Service facilities such as electrical and heating equipment shall be elevated in accordance with Article 5 Section A(4); and
 - f. Openings to relieve hydrostatic pressure during a flood shall be provided below base flood elevation in conformance with Article 5 Section B(5).
8. Floodways. Located within areas of special flood hazard established in Article 3, Section B, are areas designated as floodways. The floodway is an extremely hazardous area to the velocity of floodwaters which carry

debris and potential projectiles and has erosion potential. The following provisions shall apply within such areas:

- a. No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood. Such certification and technical data shall be presented to the local administrator.
- b. If Article 5, Section B(8)(a) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article 5.
- c. No manufactured homes shall be permitted, except in an existing manufactured home park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring and the elevation standards of Article 5, Section B(3) are met.

Section C. Standards For Streams Without Established Base Flood Elevations And/Or Floodways.

Located within the area of special flood hazard established in Article 3, Section B, are small streams where no base flood data has been provided or where no floodways have been identified. The following provisions apply within such areas:

1. No encroachment, including fill, new construction, substantial improvements or new development shall be permitted within a distance of the stream bank equal to the setback established by the Coastal Management Act (CAMA) regulations. Where no setback is established by CAMA regulations the area of no encroachment shall be twenty feet each side from the top of bank or five times the width of the stream, whichever is greater, unless certification with supporting technical data by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
2. If Article 5, Section C(1) is satisfied and base flood elevation data is available from other sources, all new construction and substantial improvements within such areas shall comply with all applicable flood hazard ordinance provisions of Article 5 and shall be elevated or flood-proofed in accordance with elevations established in accordance with

Article 4, Section C(10). When base flood elevation data is not available from a Federal, State or other source, the lowest floor, including basement, shall be elevated at least two (2) feet above the highest adjacent grade.

3. A no rise certification will be required for any commercial and industrial development and for any fill being conducted within a flood hazard area. However, on single family residential, where the property owner is going to place a residence, the property owner will be allowed to fill up to 10,000 square feet before a no rise certification by a registered engineer will be required.

Section D. Standards For Subdivision Proposals

1. All subdivision proposals shall be consistent with the need to minimize flood damage;
2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;
3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards; and,
4. Base flood elevation data shall be provided for subdivision proposals and other proposed development which is greater than the lesser of fifty lots or five acres.
5. The minimum lot size shall contain the square footage as required and set forth in the Caldwell County Zoning Ordinance excluding that portion of the property which lies within the flood hazard area.

Section E. Standards For Areas Of Shallow Flooding (AO Zones).

Located within the areas of special flood hazard established in Article 3, Section B, are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one(1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. The following provisions shall apply within such areas:

1. All new construction and substantial improvements of residential structures shall have the lowest floor, including basement, elevated to the depth number specified on the Flood Insurance Rate Map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement, shall be elevated at least two (2)

feet above the highest adjacent grade.

2. All new construction and substantial improvements of non-residential structures shall:
 - a. have the lowest floor, including basement, elevated to the depth number specified on the Flood Insurance Rate Map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement, shall be elevated at least two (2) feet above the highest adjacent grade; or,
 - b. be completely flood-proofed together with attendant utility and sanitary facilities to or above the level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

ARTICLE 6 LEGAL STATUS PROVISIONS

Section A. Effect on Rights and Liabilities Under The Existing Flood Damage Prevention Ordinance

The Ordinance in part comes forward by re-enactment of some of the provisions of the flood damage prevention ordinance enacted May 15, 1978 as amended, and it is not the intention to repeal but rather to re-enact and continue to enforce without interruption of such existing provisions, so that all rights and liabilities that have accrued thereunder are reserved and may be enforced. The enactment of this ordinance shall not affect any action, suit or proceeding instituted or pending. All provisions of the flood damage prevention ordinance of Caldwell County enacted on May 15, 1978, as amended, which are not re-enacted herein are repealed.

Section B. Effect Upon Outstanding Building Permits

Nothing herein contained shall require any change in the plans, construction, size or designated use of any building, structure, or part thereof which a building permit has been granted by the Chief Building Inspector or his authorized agents before the time of passage of this ordinance; provided, however, that when construction is not begun under such outstanding permit within a period of sixty (60) days subsequent to passage of this ordinance, construction or use shall be in conformity with the provisions of this ordinance.

Section C. Effective Date

The ordinance shall become effective upon adoption.

Section D. Adoption Certificate

I hereby certify that this is a true and correct copy of the flood damage prevention ordinance as adopted by the Board of Commissioners of _____
_____ on the _____ day of _____, 1993.

Chairperson,
Caldwell County Board of Commissioners

Clerk to the Board

