



GREENWOOD COUNTY, SOUTH CAROLINA
GREENWOOD COUNTY COUNCIL
ORDINANCE NO: 2011-06

AMENDED ORDINANCE NO: 2012-09

An Ordinance to Amend Chapter 6 of Title 6 of the Greenwood County Code to Create a Flood Management Overlay Zone for the Management of Floodplains and Regulatory Floodways Within the Unincorporated Areas of Greenwood County and to Provide for Other Matters Related Thereto

Section 6-6-100 Creation of Flood Management Overlay Zone

- a. The purpose of the overlay zone is to impose a set of requirements on all property within the district, regardless of the underlying zoning district classification of each parcel of property, because of the compelling public interest in managing the floodplains and the regulatory floodways in order to ensure that the uses thereof which are dangerous to health, safety, and property due to flood hazards, or which increase flood heights or flood velocities, can be avoided.
- b. Pursuant to Section 6-29-720(5), Code of Laws of South Carolina, 1976, as amended, there is hereby created an overlay zone within the unincorporated areas of Greenwood County consisting of all property within the Areas of Special Flood Hazard as determined by the Federal Emergency Management Agency (FEMA) on that certain Flood Insurance Study (FIS) of the unincorporated areas of Greenwood County with an effective date of May 3, 2011 and which are shown on the Flood Insurance Rate Maps (FIRM) and Digital Flood Insurance Rate Maps (DFIRM) prepared by FEMA with an effective date of May 3, 2011.
- c. The overlay zone shall be referred to as the Flood Management Overlay Zone.
- d. The Director of the Greenwood County Planning Department shall adjust the boundaries of the Flood Management Overlay Zone on the zoning maps from time to time to reflect amendments made to the FIRM/DFIRM by FEMA so that the boundaries of the overlay zone will always remain coterminous with the Areas of Special Flood Hazard referenced above.

Section 6-6-200 Findings of Fact - Purposes and Objectives - Disclaimer of Liability

- a. The Special Flood Hazard Areas in the unincorporated areas of Greenwood 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.

Furthermore, 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 or hazardous to other lands which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

- b. It is the purpose of this ordinance to protect human life and health, minimize property damage, and encourage appropriate construction practices to minimize public and private losses due to flood conditions by requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction. Uses of the floodplain which are dangerous to health, safety, and property due to water or erosion hazards, or which increase flood heights, velocities, or erosion are restricted or prohibited. These provisions attempt to control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters, and control filling, grading, dredging and other development which may increase flood damage or erosion. Additionally, the ordinance prevents or regulates the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

The objectives of this ordinance are to protect human life and health, 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 blight areas, and to insure that potential home buyers are notified that property is in a flood area. The provisions of the ordinance are intended to minimize damage to public facilities and utilities such as water and gas mains, electric, telephone, and sewer lines, streets and bridges located in the floodplain, and prolonged business interruptions. Also, an important floodplain management objective of this ordinance is to minimize expenditure of public money for costly flood control projects and rescue and relief efforts associated with flooding.

Floodplains are an important asset to the community. They perform vital natural functions such as temporary storage of floodwaters, moderation of peak flood flows, maintenance of water quality, groundwater recharge, prevention of erosion, habitat for diverse natural wildlife populations, recreational opportunities, and aesthetic quality. These functions are best served if floodplains are kept in their natural state. Wherever possible, the natural characteristics of floodplains and their associated wetlands and water bodies should be preserved and enhanced. Decisions to alter floodplains, especially floodways and stream channels, should be the result of careful planning processes that evaluate resource conditions and

human needs.

- c. 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 rare 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 Greenwood 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 6-6-300 Administration

- a. The Flood Management Overlay Zone shall be administered by the Director of the Greenwood County Planning Department, or his designee, (the “Zoning Administrator”) as part of the Greenwood County Zoning Ordinance, and the Zoning Administrator shall be responsible for submitting reports to FEMA as required by law.
- b. Appeals from a decision of the Zoning Administrator in the administration of this Chapter shall be made in accordance with Section 6-29-800(A)(1), Code of Laws of South Carolina, 1976, as amended.
- c. Enforcement of this chapter shall be pursuant to 6-29-950, Code of Laws of South Carolina, 1976, as amended.

Section 6-6-400 Adoption of Definitions

- a. The definitions set forth in 44 CFR 59.1 are adopted verbatim by reference. For ease of reference by the members of the public, a copy of the definitions are attached hereto as Appendix 1.
- b. Elevation means elevation in relation to mean sea level in the North American Vertical Datum (NAVD) of 1988, which is the datum to which the base flood elevations on the FIS and FIRM/DFIRM are referenced.
- c. Elevation 440 and Elevation 442 mean 440 feet and 442 feet above mean sea level in the National Geodetic Vertical Datum (NGVD) of 1929, which is the datum to which the jurisdictional boundary for the Federal Energy Regulatory Commission on the Buzzards Roost Project (P-1267) is referenced.

Section 6-6-500 Designation of Floodplain Boundaries and Regulatory Floodways

- a. The boundaries of the Floodplains in the unincorporated areas of Greenwood County are hereby designated to be those Areas of Special Flood Hazard identified

by FEMA in the FIS and on the FIRM/DFIRM with an effective date of May 3, 2011, as amended from time to time.

- b. The Regulatory Floodways in the unincorporated areas of Greenwood County are hereby designated to be the channels of each watercourse within each Floodplain, together with those additional areas within Zone AE of each Floodway which are designated as “Floodway Areas in Zone AE” on the FIRM/DFIRM, as amended from time to time; provided, however, the following classes of property are specifically excluded from being designated as Regulatory Floodways even though such properties are within the Floodplain:
 - i. The property comprising the bed of Lake Greenwood lying below Elevation 440, being the jurisdictional boundary of the Federal Energy Regulatory Commission as set forth in that certain License granted to Greenwood County authorizing the impoundment of Lake Greenwood and the operation of the Buzzards Roost Project (FERC P-1267).
 - ii. The property adjoining the bed of Lake Greenwood lying below Elevation 442.3 NAVD 1988 (442.8 NGVD 1929) as established in the FIS.
- c. Map Interpretation - Where interpretation is needed as to the exact location of boundaries of the Areas of Special Flood Hazard or the Regulatory Floodways in the unincorporated areas of Greenwood County, the County Engineer shall provide the necessary interpretation. The actual field locations of the contour lines matching the applicable base flood elevation in the FIS shall be given priority over the graphical boundary lines drawn on the FIRM/DFIRM.

Section 6-6-600 Development within Floodplains and Regulatory Floodways.

- a. Development Permits
 - i. No Development may occur in the unincorporated areas of Greenwood County until a certificate of zoning compliance has been issued by the Zoning Administrator certifying that the Development, as proposed, will be in compliance with all provisions of the Greenwood County Zoning Ordinance, including the provisions of this chapter.
 - ii. No certificate of zoning compliance shall be issued for any parcel of property if any portion of the parcel is within the Flood Management Overlay Zone until a plot plan prepared by a Registered Land Surveyor is provided which identifies the site of the Proposed Development and shows the 100-year floodplain contour relative to the property boundaries and relative to the proposed Development.
 - iii. The Zoning Administrator shall maintain a record of all certificates of zoning compliance.

- b. Development within Regulatory Floodways:
 - i. As mandated by 44 CFR 60.3(d)(3), no encroachments, including fill, new construction, substantial improvements, additions or other developments shall be permitted within any Regulatory Floodway.
 - ii. Notwithstanding 6-6-600(b)(i), the following types of Development are allowed within a Regulatory Floodway, if otherwise permitted in the underlying zoning district, if the proposed developer provides certifications and supporting technical data from a Registered Professional Engineer which certifies, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that the proposed encroachment will not result in any increase in flood levels within the community during the occurrence of the base flood discharge:
 - (1) Roads, bridges and similar public infrastructure owned and maintained by a governmental entity.
 - (2) Instrumentalities for providing utilities which are owned, operated and maintained by a public utility company regulated by the Federal Communications Commission, the South Carolina Public Service Commission, or by a governmental entity, including water, sewer, gas, electricity, telephone, cable television and similar utilities; provided, however, that sewer pump stations and treatment plants shall not be allowed within the Regulatory Floodways.
- c. Development within Floodplains
 - i. Residential Construction – New construction and substantial improvement of any residential structure (including manufactured homes) shall have the lowest floor elevated no lower than one foot above the base flood elevation. No basements are permitted. Should solid foundation perimeter walls be used to elevate a structure, flood openings sufficient to automatically equalize hydrostatic flood forces, shall be provided in accordance with the elevated buildings requirements in Section 6-6-600 c.iii.(1) (d).
 - ii. Non-residential Construction
 - (1) New construction and substantial improvement of any commercial, industrial, or non-residential structure (including manufactured homes) shall have the lowest floor elevated no lower than one foot above the level of the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, flood openings sufficient to automatically equalize hydrostatic flood forces, shall be provided in accordance with the elevated buildings

requirements in Section 6-6-600 c.iii.(1) (d). No basements are permitted. Structures located in A-zones may be floodproofed 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 hydrostatic and hydrodynamic loads and the effect of buoyancy.

- (2) A registered, professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certifications shall be provided to the official as set forth in the floodproofing certification requirements in Section 6-7-800 a.i. A variance may be considered for wet-floodproofing agricultural structures for the conduct of a functionally dependant use, no reasonable alternative exists, and the development is protected by methods that minimize flood damage and create no additional threat to public safety. Agricultural structures not meeting these criteria must meet the non-residential construction standards and all other applicable provisions of this ordinance. Structures that are floodproofed are required to have an approved maintenance plan with an annual exercise. The Local Administrator must approve the maintenance plan and notification of the annual exercise shall be provided to it.

iii. Manufactured Homes

- (1) Manufactured homes that are placed or substantially improved on sites outside a manufactured home park or subdivision, in a new manufactured home park or subdivision, in an expansion to an existing manufacture home park or subdivision, or in an existing manufactured home park or subdivision on which a manufactured home has incurred “substantial damage” as the 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 foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
- (2) 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 for residential construction in Section 6-6-600 c.i. of this ordinance must be elevated so that the lowest floor of the manufactured home is elevated no lower than one foot above the base flood elevation, and be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement.

- (3) Manufactured homes shall be anchored to prevent flotation, collapse, and lateral movement. For the purpose of this requirement, manufactured homes must be anchored to resist flotation, collapse, and lateral movement in accordance with Section 40-29-10 of the *South Carolina Manufactured Housing Board Regulations*, as amended. Additionally, when the elevation requirement would be met by an elevation of the chassis 36 inches or less above the grade at the site, the chassis shall be supported by reinforced piers or engineered foundation. When the elevation of the chassis is above 36 inches in height, an engineering certification is required.
 - (4) 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 Preparedness Coordinator.
- iv. Elevated Buildings – New construction and substantial improvements of elevated buildings that include fully enclosed areas below the lowest floor that are usable solely for the parking of vehicles, building access, or limited storage in an area other than a basement, and which are subject to flooding shall be designed to preclude finished space and be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.
- (1) Designs for complying with this requirement must either be certified by a professional engineer or architect or meet or exceed all of the following minimal criteria:
 - (a) Provide a minimum of two openings on different walls having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding.
 - (b) The bottom of each opening must be no more than one foot above the higher of the interior or exterior grade immediately under the opening.
 - (c) Only the portions of openings that are below the base flood elevation (BFE) can be counted towards the required net open area.
 - (d) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.

- (e) Fill placed around foundation walls must be graded so that the grade inside the enclosed area is equal to or higher than the adjacent grade outside the building on at least one side of the building.
- (2) Hazardous Velocities – Hydrodynamic pressure must be considered in the design of any foundation system where velocity waters or the potential for debris flow exists. If flood velocities are excessive (greater than five feet per second), foundation systems other than solid foundation walls should be considered so that obstructions to damaging flood flows are minimized.
- (3) Enclosures Below Lowest Floor
 - (a) Access to the enclosed parking areas 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).
 - (b) The interior portion of such enclosed area shall not be finished or partitioned into separate rooms, must be void of utilities except for essential lighting as required for safety, and cannot be temperature controlled.
 - (c) One wet location switch and/or outlet connected to a ground fault interrupt breaker may be installed below the required lowest floor elevation specified in the specific standards outlined in Sections 6-6-600 c. i., ii, and iii.
 - (d) All construction materials below the required lowest floor elevation specified in the specific standards outlined in Sections 6-6-600 c. i., ii, iii, and iv should be of flood resistant materials.

v. Lake Greenwood

- (1) The following types of development are allowed within the bed of Lake Greenwood - all docks, marinas, retaining walls, boat ramps, and similar encroachments into Lake Greenwood which are specifically allowed by the regulations adopted in accordance with Article 407 of the License issued by the Federal Energy Regulatory Commission (FERC) to Greenwood County authorizing the impoundments of Lake Greenwood and the operation of the Buzzards Roost Project (FERC P-1267).

- (2) Fill may be allowed on all lakefront properties adjacent to the Lake Greenwood Project Boundary. Property owners may fill to the 440.0 contour line or higher within the bounds of their property.

vi. Other Development

- (1) The following types of Development are allowed within Zone AE (Floodplains for which Base Flood Elevations have been provided by the Flood Insurance Administrator), if otherwise permitted in the underlying zoning district, if the proposed developer provides certifications and supporting technical data from a Registered Professional Engineer licensed to practice in the State of South Carolina which certifies, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that the proposed encroachment will not result in any increase in flood levels within the community during the occurrence of the base flood discharge:

Development which is allowed within a Regulatory Floodway is also allowed in a Floodplain.

- (a) Farming activities which do not involve grading such as cultivation of field crops (excluding trees) and grazing livestock.
- (b) Greens, fairways and driving ranges of golf courses and miniature golf.
- (c) Campsites for recreational vehicles which are fully licensed and ready for highway use. As set forth in 44 CFT 60(c)(14), a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.
- (d) Campsites for tents and pop-up campers.
- (e) Parks and similar recreation facilities as long as any benches, tables or similar items are anchored to prevent flotation during floods.
- (f) Uncovered decks and patios.
- (g) Parking lots which follow existing grades.

- (h) Sewer pump stations and treatment facilities which meet the flood-proofing requirements of 44 CFR 60(d).
 - (2) In Zone A (Floodplains for which Base Flood Elevations have not been provided by the Flood Insurance Administrator), Development shall be allowed to the same extent as allowed in Zone AE if the proposed Developer provides Base Flood Elevations which have been determined by a Registered Professional Engineer from a hydrologic and hydraulic analyses performed in accordance with standard engineering practice.
 - (3) Development which has been approved by a Conditional Letter of Map Revision from the Federal Insurance Administrator shall be allowed.
 - (4) Development within the Floodway is expressly prohibited.
- d. Alteration or Relocation of Watercourses
 - i. Watercourses may not be relocated or altered.

Section 6-6-700 Variances

- a. The provisions of this chapter shall not apply to any parcel(s) of property if the application of those provisions would constitute a Compensable Regulatory Taking.
 - i. A Compensable Regulatory Taking is a regulatory taking for which compensation must be paid by Greenwood County under the constitution and laws of the United States or of the State of South Carolina.
- b. Any owner of property claiming an exemption pursuant to subparagraph 6-6-700(a) shall file a petition with the Board of Zoning Appeals seeking a variance from the provisions of this chapter. The petition shall identify the Zone(s) which affect the parcel, the particulars of the Compensable Regulatory Taking that the applicant alleges would occur and the specifics of how the proposed Development will comply with the Standards for Development within Floodplains or Regulatory Floodways set forth in Appendix B if the variance is granted.
- c. Decision by Board of Zoning Appeals - Appeal from Decision
 - i. If the Board of Zoning Appeals finds that the application of this ordinance to the owner's proposed Development would constitute a Compensable Regulatory Taking, the Board of Zoning Appeals shall, to the extent necessary to prevent the Compensable Regulatory Taking from occurring, grant variances allowing the proposed Development in accordance with the

requirements of Appendix B.

- ii. If the Board of Zoning Appeals finds that the application of this ordinance to the owner's proposed Development would not constitute a Compensable Regulatory Taking, the Board of Zoning Appeals shall not grant a variance.
- iii. The decision of the Board of Zoning Appeals may be appealed to the courts of the State of South Carolina in the manner provided by Sections 6-29-820 through 850, Code of Laws of South Carolina, 1976, as amended. The final decision of the Board of Zoning Appeals, as modified on appeal if applicable, shall be binding on all parties.

Section 6-7-800 Certifications Required

- a. Before construction commences, the applicant must provide
 - i. A certification from a S.C. Registered Professional Engineer that all aspects of the proposed new or substantially improved structure which are subject to flooding during the Base Flood have been designed in accordance with the applicable Standards for Development within Floodplains or Regulatory Floodways set forth in Appendix B.
 - ii. For a Development in Zone AE
 - (1) A plot plan prepared by a S.C. Registered Land Surveyor showing the Elevation of the lowest floor of all proposed new and substantially improved structures relative to the Base Flood Elevations provided by the Federal Insurance Administrator.
 - iii. For a Development in Zone A which involves at least 5 acres or 50 lots,
 - (1) Certifications and supporting technical data from a Registered Professional Engineer providing the Base Flood Elevations for the parcel as determined from hydrologic and hydraulic analyses performed in accordance with standard engineering practice.
 - (2) A plot plan prepared by a S.C. Registered Land Surveyor showing the Elevation of the lowest flood of all proposed new and substantially improved structures relative to the Base Flood Elevations provided by the Engineer.
 - iv. For a smaller Development in Zone A, a plot plan prepared by a S.C. Registered Land Surveyor showing the existing grade contours at 5 foot intervals within boundaries of the affected parcel and extending for a distance of 50 feet in each direction as well as the Elevation of the highest portion of the boundary of Zone A as it crosses the parcel.

- b. Once the lowest floor of a structure is completed and before any further vertical construction commences,
 - i. the applicant must provide a certification from a S.C. Registered Land Surveyor of the Elevation of the lowest floor, as built, and
 - ii. the applicant must provide a certification from a S.C. Registered Professional Engineer that the structure, as built, complies with the Standards for Development within Floodplains or Regulatory Floodways set forth in Appendix B.

- c. When an area below the lowest floor is to be enclosed, the enclosure must be completed by no later than the time the lowest floor of the structure is completed. Once the enclosure is completed, and before any further vertical construction commences, the applicant must provide a certification from a S.C. Registered Professional Engineer that the enclosure, as built, complies with the Standards for Development within Floodplains or Regulatory Floodways set forth in Appendix B.”