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Second Reading and Adoption: September 12, 2023

Present:

David Stevens, Chairman
Kate Karwacki, Vice-Chairman
Roger Lotson, Commissioner
William Harrell, Commissioner
Davis Poole, Commissioner

On motion of _____, which carried _____, the following Ordinance amendment was adopted:

AN AMENDMENT TO THE CODE OF ORDINANCES OF MCINTOSH COUNTY BY
AMENDING CHAPTER 10 ARTICLE IV SECTION 10-54 OF THE MCINTOSH
COUNTY FLOOD PREVENTION ORDINANCE

The McIntosh County Board of Commissioners hereby ordains, this _____ day of _____, 2023 that Chapter 10, of the Code of Ordinances is hereby amended to read as follows:

Sec. 10-54. Provisions for flood hazard reduction.

(a) *General standards.* In all areas of special flood hazard the following provisions are required:

- (1) New construction and substantial improvements shall be anchored to prevent flotation, collapse and lateral movement of the structure.
- (2) New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (3) New construction and substantial improvements shall be constructed by methods and practices that minimize flood damage.

- 42 (4) Elevated buildings: All new construction and substantial improvements that
43 include any fully enclosed area located below the lowest floor formed by
44 foundation and other exterior walls shall be designed so as to be an unfinished
45 or flood resistant enclosure. The enclosure shall be designed to equalize
46 hydrostatic flood forces on exterior walls by allowing for the automatic entry
47 and exit of floodwater. (Not applicable in coastal high hazard areas.)
- 48 a. Designs for complying with this requirement must either be certified by a
49 professional engineer or architect or meet or exceed the following
50 minimum criteria:
- 51 1. Provide a minimum of two openings having a total net area of not less
52 than one square inch for every square foot of enclosed area subject to
53 flooding;
- 54 2. The bottom of all openings shall be no higher than one foot above
55 grade; and
- 56 3. Openings may be equipped with screens, louvers, valves or other
57 coverings or devices provided they permit the automatic flow of
58 floodwater in both directions;
- 59 b. So as not to violate the "lowest floor" criteria of this article, the unfinished
60 or flood resistant enclosure shall only be used for parking of vehicles,
61 limited storage of maintenance equipment used in connection with the
62 premises, or entry to the elevated area; and
- 63 c. The interior portion of such enclosed area shall not be finished or
64 partitioned into separate rooms.
- 65 (5) All heating and air conditioning equipment and components (including
66 ductwork), all electrical, ventilation, plumbing, and other service facilities shall
67 be designed, located and elevated at or above 1 ft. above base flood elevation
68 so as to prevent water from entering or accumulating within the components
69 during conditions of flooding.
- 70 (6) Manufactured homes shall be anchored to prevent floatation, collapse and
71 lateral movement. Methods of anchoring may include, but are not limited to,
72 use of over-the-top or frame ties to ground anchors. This standard shall be in
73 addition to and consistent with applicable state requirements for resisting wind
74 forces.
- 75 (7) New and replacement water supply systems shall be designed to minimize or
76 eliminate infiltration of flood waters into the system.
- 77 (8) New and replacement sanitary sewage systems shall be designed to minimize
78 or eliminate infiltration of flood waters into the systems and discharges from the
79 systems into flood waters.
- 80 (9) On-site waste disposal systems shall be located and constructed to avoid
81 impairment to them or contamination from them during flooding.

(10) Any alteration, repair, reconstruction or improvement to a structure, which is not compliant with the provisions of this article, shall be undertaken only if the non-conformity is not furthered, extended or replaced.

(b) *Specific standards.* In all areas of special flood hazard designated as A1-30, AE, AH, A (with engineered or estimated BFE), the following provisions are required:

(1) *New construction and substantial improvements.* Where base flood elevation data are available, new construction and substantial improvement of any structure including manufactured home shall have the lowest floor, including basement, elevated no lower than one 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 in accordance with standards of section 10-54(a)(4), elevated buildings.

a. All heating and air conditioning equipment and components (including ductwork), all electrical, ventilation, plumbing and other service facilities shall be elevated at or above one foot above the base flood elevation.

(2) *Nonresidential construction.* New construction and the substantial improvement of any structure including manufactured housing, may be floodproofed in lieu of elevation. (Not applicable for coastal high hazard areas.) The structure, together with attendant utility and sanitary facilities, must be designed to be water tight to one foot above the base flood elevation, with walls substantially impermeable to the passage of water, and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions above, and shall provide such certification to the official as set forth above and in section 10-53(c)(6). An operation and maintenance plan shall be prepared to assure the continued viability of floodproofing measures.

(3) *Standards for manufactured homes and recreational vehicles.* Where base flood elevation data are available:

a. All manufactured homes placed and substantially improved on: (1) individual lots or parcels, (2) in new and substantially improved manufactured home parks or subdivisions, (3) in expansions to existing manufactured home parks or subdivisions, or (4) on a site in an existing manufactured home park or subdivision where a manufactured home has incurred "substantial damage" as the result of a flood, must have the lowest floor, including basement, elevated no lower than one foot above the base flood elevation.

b. Manufactured homes placed and/or substantially improved in an existing manufactured home park or subdivision may be elevated so that:

1. The lowest floor of the manufactured home is elevated no lower than one foot above the level of the base flood elevation; and

- 125 2. The manufactured home chassis is elevated and supported by
126 reinforced piers (or other foundation elements of at least an
127 equivalent strength) of no less than 48 inches in height above grade.
- 128 c. All manufactured homes must be securely anchored to an adequately
129 anchored foundation system to resist flotation, collapse and lateral
130 movement. (See section 10-54(a)(6).)
- 131 d. All recreational vehicles placed on sites must either:
- 132 1. Be on the site for fewer than 180 consecutive days;
- 133 2. Be fully licensed and ready for highway use (a recreational vehicle is
134 ready for highway use if it is licensed, on its wheels or jacking system,
135 attached to the site only by quick disconnect type utilities and security
136 devices, and has no permanently attached structures or additions); or
- 137 3. The recreational vehicle must meet all the requirements for new
138 construction, including the anchoring and elevation requirements of
139 section 10-54(b)(3) a.—c., above.
- 140 (4) *Floodway*. Located within areas of special flood hazard established in section
141 10-52(b) are areas designated as floodway. A floodway may be an extremely
142 hazardous area due to velocity floodwaters, debris or erosion potential. In
143 addition, the area must remain free of encroachment in order to allow for the
144 discharge of the base flood without increased flood heights. Therefore, the
145 following provisions shall apply:
- 146 a. Encroachments are prohibited, including earthen fill, new construction,
147 substantial improvements or other development within the regulatory
148 floodway. Development may be permitted however, provided it is
149 demonstrated through hydrologic and hydraulic analyses performed in
150 accordance with standard engineering practice that the encroachment
151 shall not result in any increase in flood levels or floodway widths during the
152 base flood discharge. A registered professional engineer must provide
153 supporting analysis, technical data and certification thereof.
- 154 b. Only if section 10-54(b)(4)a. above is satisfied, all new construction and
155 substantial improvements shall comply with all applicable flood hazard
156 reduction provisions of section 10-54.
- 157 (c) *Building standards for streams without established base flood elevations and*
158 *floodway (A-zones)*. Located within the areas of special flood hazard established in
159 section 10-52(b), where streams exist but no base flood data and floodway data
160 have been provided (A-zones), the following provisions apply:
- 161 (1) For subdivisions and developments greater than 50 lots or five acres,
162 whichever is less, base flood elevation data shall be provided for subdivision
163 and all other proposed development, including manufactured home parks and
164 subdivisions. Any changes or revisions to the flood data adopted herein and
165 shown on the FIRM shall be submitted to FEMA for review as a conditional
166 letter of map revision (CLOMR) or conditional letter of map amendment

(CLOMA), whichever is applicable. Upon completion of the project, the developer is responsible for submitting the "as-built" data to FEMA in order to obtain the final LOMR.

(2) When base flood elevation data or floodway data have not been provided in accordance with section 10-52(b), then the floodplain manager shall obtain, review, and reasonably utilize any scientific or historic base flood elevation and floodway data available from a federal, state, or other source, in order to administer the provisions of section 10-54. Only if data is not available from these sources, the provisions of section 10-54(c)(2) and (3) shall apply.

(3) No encroachments, including structures or fill material, shall be located within an area equal to the width of the stream or 25 feet, whichever is greater, measured from the top of the stream bank, unless certification by a registered professional engineer is provided demonstrating that such encroachment shall not result in more than one foot increase in flood levels during the occurrence of the base flood discharge.

(4) In special flood hazard areas without base flood elevation data, new construction and substantial improvements shall have the lowest floor of the lowest enclosed area (including basement) elevated no less than three feet above the highest adjacent grade at the building site. (Note: Require the lowest floor to be elevated one foot above the estimated base flood elevation in A-zone areas where a limited detail study has been completed.) Openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of section 10-54(a)(4), elevated buildings.

a. All heating and air conditioning equipment and components (including ductwork), all electrical, ventilation, plumbing, and other service facilities shall be elevated no less than three feet above the highest adjacent grade at the building site.

The floodplain manager shall certify the lowest floor elevation and the record shall become a permanent part of the permit file.

(d) *Standards for areas of special flood hazard (Zones AE) with established base flood elevations and without designated floodways.* Located within the areas of special flood hazard established in section 10-52(b), where streams with base flood elevations are provided but no floodways have been designated (Zones AE), the following provisions apply:

(1) No encroachments, including fill material, new structures or substantial improvements shall be located within areas of special flood hazard, unless certification by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles.

(2) New construction and substantial improvements shall be elevated or floodproofed to elevations established in accordance with section 10-54(b).

(e) *Standards for areas of shallow flooding (AO Zones)*. Areas of special flood hazard established in section 10-52(b), may include designated "AO" shallow flooding areas. These areas have base flood depths of one to three feet above ground, with no clearly defined channel. The following provisions apply:

(1) All new construction and substantial improvements of residential and nonresidential structures shall have the lowest floor, including basement, elevated to at least one foot above as high as the flood depth number specified (in feet) on the flood insurance rate map (FIRM), above the highest adjacent grade. If no flood depth number is specified, the lowest floor, including basement, shall be elevated at least three feet above the highest adjacent grade. Openings sufficient to facilitate the unimpeded movements of flood waters shall be provided in accordance with standards of section 10-54(a)(4), elevated buildings.

The floodplain manager shall certify the lowest floor elevation level and the record shall become a permanent part of the permit file.

(2) New construction and the substantial improvement of a nonresidential structure may be floodproofed in lieu of elevation. The structure, together with attendant utility and sanitary facilities, must be designed to be water tight to the specified flood level in section 10-54(e) plus one foot, above highest adjacent grade, with walls substantially impermeable to the passage of water, and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions above, and shall provide such certification to the official as set forth above and as required in section 10-53(b)(1)c. and (b)(2). An O&M plan shall be submitted to assure continued viability of the floodproofing measures

(3) Drainage paths shall be provided to guide floodwater around and away from any proposed structure.

(f) *Coastal high hazard areas (V-Zones and Coastal A (LiMWA))*. Located within the areas of special flood hazard established in section 10-52(b) are areas designated as coastal high hazard areas (V-Zones). These areas have special flood hazards associated with wave action and storm surge, therefore, the following provisions shall apply:

(1) All new construction and substantial improvements shall be located landward of the reach of mean high tide;

(2) All new construction and substantial improvements of existing structures shall be elevated on piles, columns, or shear walls parallel to the flow of water so that the bottom of the lowest supporting horizontal structural member (excluding pilings or columns) is located no lower than one foot above the base flood elevation level. All space below the lowest supporting member shall

- remain free of obstruction or constructed with non-supporting breakaway walls. Open wood lattice work or decorative screening may be permitted for aesthetic purposes only and must be designed to wash away in the event of abnormal wave action and in accordance with section 10-54(f)(6);
- (3) All new construction and substantial improvements shall be securely anchored on pilings, or columns;
- (4) All pile and column foundations and the structures attached thereto shall be anchored to resist flotation, collapse, and lateral movement due to the combined effects of wind and water loads acting simultaneously on all building components, both nonstructural and structural. Water loading values shall equal or exceed those associated with the base flood. Wind loading values shall be in accordance with the most current edition of the Georgia State adopted Standard Building Code.
- (5) A registered professional engineer or architect shall certify that the design, specifications and plans for construction are in compliance with the provisions contained in section 10-54(e)(2), (3) and (4).
- (6) All space below the lowest horizontal supporting member must remain free of obstruction. Open wood lattice work or decorative screening may be permitted for aesthetic purposes only and must be designed to wash away in the event of abnormal wave action without causing structural damage to the supporting foundation or elevated portion of the structure. The following design specifications are allowed:
- a. No solid walls shall be allowed;
 - b. Material shall consist of open wood lattice or insect screening only; and
 - c. If aesthetic open wood lattice work or screening is utilized, any enclosed space shall not be used for human habitation, but shall be designed to be used only for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises.
- (7) Prior to construction, plans for any structures having open wood latticework or insect screening must be submitted to the floodplain manager for approval.
- (8) Any alteration, repair, reconstruction or improvement to any structure shall not enclose the space below the lowest floor except with open wood latticework or decorative screening, as provided in this section.
- (9) There shall be no fill used as structural support, or to elevate areas used for septic tank drain fields. Limited non-compacted fill may be used around the perimeter of a building for landscaping/aesthetic purposes provided the fill will wash out from storm surge (thereby rendering the building free of obstruction) prior to generating excessive loading forces, ramping effects, or wave deflection. The floodplain manager may approve design plans for landscaping/aesthetic fill only after the applicant has provided an analysis by an engineer, architect or soil scientist, which demonstrates that the following factors have been fully evaluated:

- 295 a. Particle composition of fill material does not have a tendency for excessive
296 natural compaction;
- 297 b. Volume and distribution of fill will not cause wave deflection to adjacent
298 properties; and
- 299 c. Slope of fill will not cause wave run-up or ramping.
- 300 (10) There shall be no alteration of sand dunes or mangrove stands, which would
301 increase potential flood damage.
- 302 (11) Prohibit the placement of manufactured homes (mobile homes), except in an
303 existing manufactured homes park or subdivision. A replacement
304 manufactured home may be placed on a lot in an existing manufactured home
305 park or subdivision provided the anchoring standards of section 10-54(b)(3) are
306 met.
- 307 (g) *Standards for subdivisions.*
- 308 (1) All subdivision proposals and other development proposals shall be consistent
309 with the need to minimize flood damage.
- 310 (2) All subdivision proposals and other development proposals shall have public
311 utilities and facilities such as sewer, gas, electrical and water systems located
312 and constructed to minimize flood damage.
- 313 (3) All subdivision proposals and other development proposals shall have
314 adequate drainage provided to reduce exposure to flood hazards.
- 315 (h) *Standard for critical facilities.*
- 316 (1) No new critical facilities and substantial improved critical facilities shall be
317 located in the 100-year floodplain or the 500-year floodplain.
- 318 (2) All ingress and egress from any critical facility must be protected to the 500-
319 year flood elevation.
- 320 (3) Hazardous materials shall not be stored in the SFHA. The following materials
321 are prohibited in the SFHA. Acetone, ammonia, benzene, calcium carbide,
322 carbon disulfide, celluloid, chlorine, hydrochloric acid, prussic, magnesium,
323 nitric acid, oxides of nitrogen, phosphorus, potassium, sodium and sulfur.

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This Amendment shall become effective upon passage.

MCINTOSH COUNTY BOARD OF COMMISSIONERS

DAVID S. STEVENS, CHAIRMAN

ATTEST:

MCINTOSH COUNTY CLERK