Introduced May 11, 2021, by Councilman Tamborella, seconded by Councilwoman Denham, (by request of Administration)

Item No. 21-05-3369

ORDINANCE NO. 4038

An ordinance amending the Code of Ordinances of the City of Slidell, Chapter 15, Floods, Article II. Flood Hazard Prevention, and Ch. 7 Building and Building Regulations, Article VIII. Drainage, to add higher regulatory standards and related provisions.

WHEREAS, the City has enforced floodplain development regulations since the early 1970s, which makes the City a National Flood Insurance Program (NFIP) participating community and allows property owners to purchase flood insurance through the NFIP; and

WHEREAS, since 1992, the City has participated in the NFIP's Community Rating System (CRS), which rewards communities who voluntarily exceed minimum floodplain management regulations by providing flood insurance premium reductions for policies in the community; and

WHEREAS, one way that the City can earn a better CRS rating – and larger flood insurance discounts – is by adopting higher floodplain management regulatory standards; and

WHEREAS, the City desires to maintain and improve its current CRS rating of a Class 8, to continue to earn or increase the flood insurance premium reductions enjoyed in the community; and

WHEREAS, public health, safety, and welfare are protected by the increased effort and attention given to the issue of flooding through the City's participation in the CRS program, including the adoption and enforcement of higher regulatory standards to ensure

responsible development and redevelopment, which helps to reduce the severity of flooding and risk to property and people.

NOW THEREFORE BE IT ORDAINED by the Slidell City Council that it does hereby make the following amendments to the Code of Ordinances of the City of Slidell:

1. Amend Ch. 15 – Floods, Article II. – Flood Hazard Prevention, Sec. 15-24. – Definitions, to add definitions for compensatory storage, critical facility, fill, and substantial improvements, and modify definitions for fill plan and substantial damage, in alphabetical order, to read as follows:

* * *

Compensatory storage means a volume not previously used for flood storage and which shall be incrementally equal to the theoretical volume of fill placed as a part of any development multiplied by a factor as defined within this section up to and including the base flood elevation.

Critical facility means facilities that are vital to flood response activities or critical to the health and safety of the public before, during, and after a flood, or facilities that if flooded would make the flood and resulting impacts worse, including but not limited to hospitals, emergency operations facilities, electric substations, police stations, fire stations, nursing homes, schools, public works facilities, vehicle and equipment storage facilities, shelters, hazardous materials facilities, water utilities, and wastewater collection and treatment facilities.

* * *

Fill means earthen material placed on a site as a part of a development or construction which alters the existing surface of the site.

Fill plan means a scaled site plan showing information listed below:

a. Elevations at all property corners and the proposed finished floor elevations for all building improvements;
b. Location and dimensions of the fill/excavation footprint;
c. Proposed elevation of all proposed paving within the property, such as driveway, patio, etc.;
d. Net volume of fill to be hauled in and placed on the site in cubic yards;

e. Net volume of material to be excavated and removed from the site or excavated and placed elsewhere on the site;

f. A calculation showing the balance of excavation and fill which shall show compliance with fill ordinances as contained herein

g. A statement attesting to compensatory storage being provided off the site;

h. The location of any drainage servitudes or waterways near the property.

Note: Elevation can be either MSL or relative. If relative, please show your reference elevation and location.

* * *

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 45 percent of the market value of the structure before the damage occurred.

Substantial improvements means any combination of reconstruction, rehabilitation, or other improvement of a structure in which the cost of the improvement equals or exceeds 45 percent of the current market value of the structure before the "start of construction" of the improvement.

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2. Amend Ch. 15 – Floods, Article II. – Flood Hazard Prevention, Sec. 15-25. – Lands to which this article applies, to make the article applicable to the entire city, to read as follows:

This article shall apply to all areas within the corporate limits of the city.

3. Amend Ch. 15 – Floods, Article II. – Flood Hazard Prevention, Sec. 15-26. - Basis for establishing areas of special flood hazard, to adopt freeboard and add the partial DFIRMs that were adopted by Ord. No. 3611, to read as follows:

(a) The following are hereby adopted by reference and declared to be a part of this article:

(1) Areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled "The Flood Insurance Study for the City of Slidell," dated April 21, 1999, with accompanying flood insurance rate maps (FIRMs). The base flood elevations (BFE) as shown on the FIRM plus two (2) feet of freeboard are hereby adopted.

(2) The advisory base flood elevations (ABFE) as shown on the revised ABFE maps for Slidell prepared by FEMA and released in February, 2006, plus two feet of freeboard are hereby adopted.

(3) The BFE shown on the FEMA preliminary Digital Flood Insurance Rate Maps (DFIRMs) for the area within the City of Slidell situated east of I-10 and south of Shortcut Highway (U.S. Hwy 190B) plus two feet of freeboard are hereby adopted.

(b) The city hereby adopts all areas of special flood hazard A, A-1—A-30 and AE, as depicted on the applicable flood insurance rate map as a regulatory floodway. These areas shall carry the waters of the base flood. Development in these areas shall not increase the water surface elevation by more than one foot at any point in the floodway.

4. Amend Ch. 15 – Floods, Article II. – Flood Hazard Prevention, Sec. 15-33. - General construction requirements, to add a new subsection (a), retain or modify existing provisions as subsection (b), adopt local drainage protection, move and update fill provisions, update enclosure provisions, adopt freeboard for service facilities, require engineered foundations, and require compensatory storage for fill, to read as follows:

(a) In all areas, the following provisions apply:

(1) *Building elevation*. The top of any exterior foundation for any building or swimming pool shall be at least two (2) feet above the centerline elevation of the nearest street.

(2) *Fill*. Fill may be placed on private property subject to the following provisions:

a. Before fill is placed, a fill plan must be approved by the engineering department as part of a development permit. If fill is not place within six months of filing the development permit, a new fill plan or written extension must be approved by the engineering department.

b. After fill is placed and prior to scheduling a foundation inspection, the "Finished Grade Verification" form must be approved by the engineering department.

c. *Slope of fill.* Fill shall taper at a maximum slope of three horizontal feet for every one vertical foot (3:1).

d. *Volume of fill.* Only a reasonable amount of fill needed to achieve the minimum required structure elevation may be allowed, as determined by the City Engineering.

e. Bulkhead construction. Bulkheads and other structure projecting into a waterway shall be constructed no farther into a lake, river, canal, bayou, or stream than the ordinary average watermark or established property line, as approved by applicable local, state, and federal agencies. Bulkheads shall be

designed so as not to impede positive drainage of the site and adjoining properties.

(b) In all areas of special flood hazards, 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 resulting from hydrodynamic and hydrostatic loads, including the effect of buoyancy;

* * *

(7) *Enclosures*. For all new construction or substantial improvement, when the lowest floor is:

a. Four (4) feet or higher than the finished grade, enclosure of the area beneath the lowest floor may be allowed subject to applicable standards of Part 3 Design Standards, Appendix B of this Code and the following:

1. Any area may be enclosed with non-structural screening meeting the standards of Sec. 3.202 Elevated residences of Appendix B of this Code.
2. An area up to 299 square feet may be fully enclosed provided a) it is designed to preclude use as living space, b) it meets or exceeds the standards in b below and c) the property owner executes and records with the structure's deed a nonconversion agreement declaring that the enclosed area shall not be improved, finished, or otherwise converted and that the City shall have the right to inspect the enclosed area at any time.

b. Less than four (4) feet higher than the finished grade, the area beneath the lowest floor may be enclosed subject to applicable standards of Part 3 Design Standards, Appendix B of this Code and provided that the enclosure is designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

1. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
2. The bottom of all openings shall be no higher than one foot above grade.
3. Openings may be equipped with screens, louvers, valves or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.

(8) Electrical, heating, ventilation, plumbing, air conditioning equipment including ductwork, and other service facilities shall be designed or located so as to prevent water from entering or accumulating within the components during conditions of flooding and, for residential construction only, shall be located above the base flood elevation plus two (2) feet of freeboard; and

(9) On all new structures or substantially improved structures, the owner or builder shall be required to supply to the city engineer and building official a legal, stamped survey or certification that certifies the elevation above mean sea level (MSL) of the bottom of the lowest structural member of the lowest floor of the structure. This certification shall be performed immediately after the construction and installation of the lowest finished floor elevation.

(10) *Engineered foundations*. All foundations shall be engineered to be protected from forces imparted by flooding and engineered to be protected from scouring. A foundation plan, signed and sealed by a licensed professional engineer registered in the State of Louisiana, shall be provided for all foundations.

(11) *Compensatory storage*. All fill must be offset with compensatory storage equal to the volume of fill. The compensatory storage may be located on the same property as the fill and shall be located such that it shall have unrestricted hydraulic connection to the same reach of the waterway or waterbody as the location where the fill was placed.

5. Amend Ch. 15 – Floods, Article II. – Flood Hazard Prevention, Sec. 15-34. - Specific standards for different types of construction, to add a new subsection (a), retain or modify existing provisions as subsection (b), require protection of critical facilities and adopt freeboard, to read as follows:

(a) In the 500-year floodplain, new critical facilities shall be elevated or otherwise protected to an elevation at least one (1) foot above the 500-year flood level.

(b) In all areas of special flood hazards, the following provisions are required:

(1) *Residential construction*. New construction or substantial improvement of any residential structure shall have the lowest floor and machinery or equipment, including ductwork, elevated to or above the base flood elevation plus two (2) feet of freeboard. A registered professional engineer, architect or land surveyor shall submit a certification to the administrator that the standard of this subsection, as proposed in section 15-31(1), is satisfied. An attached garage may have its lowest floor below the base flood level, provided it meets all criteria outlined in subsection (4) below for accessory structures.

(2) *Nonresidential construction*. New construction or substantial improvements of any commercial, industrial or other nonresidential structure shall have the lowest floor, including the basement, elevated to or above the level of the base flood elevation. A registered professional engineer or architect shall submit a certification to the administrator that the standards of this subsection, as defined in section 15-31(2), are satisfied.

Where a nonresidential structure is intended to be made watertight below the base flood level, a registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction,

and shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions of this article, and a record of such certificates which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained with the building official.

Such structure, together with attendant utility and sanitary facilities, shall be designed so that below the base flood level it 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.

* * *

(3) *Manufactured homes.*

a. No manufactured home shall be placed in a floodway or coastal high hazard area.

b. All manufactured homes shall be anchored to resist flotation, collapse, or lateral movement. Specific requirements shall be:

* * *

4. All manufactured homes to be placed or substantially improved shall be elevated on a permanent foundation such that the lowest floor of the manufactured home and machinery or equipment, including ductwork, is at or above base flood elevation plus two (2) feet of freeboard and be securely anchored in accordance with this subsection (3)b.

* * *

6. Amend Ch. 15 – Floods, Article II. – Flood Hazard Prevention, Sec. 15-38. - Fill ordinance, to delete the provisions (fill provisions moved to Sec. 15-33. - General construction requirements) and reserve the section, to read as follows:

Sec. 15-38. - Reserved.

7. Amend Ch. 7 – Buildings and Building Regulations, Article VIII. – Drainage, Division 2. – Storm Drainage, Sec. 7-228. – Design, to add stormwater quality provisions, to read as follows:

Storm drainage design shall incorporate retention/detention measures to control stormwater runoff and address water quality.

(1) *Quantity.* Postconstruction runoff shall, at a maximum, not exceed 90 percent of preconstruction runoff. Design shall evaluate and recommend the means to accomplish this reduction in runoff. All design data and calculations shall be submitted to the city engineer for review and approval prior to a building permit

being issued. Approval by the city engineer shall be issued in writing before the building permit is released. Compliance with the maximum 90 percent of preconstruction runoff rule shall be achieved unless otherwise approved in writing by the city administration, which would normally consist of the mayor or his designee, the city planner, the permit director and the city engineer. Prior to any approval of less than 90 percent preconstruction runoff, the city administration shall give written notification to the city council office and justification therefor. Requests for lower percentage reduction must be approved in writing by the city administration, which would normally consist of the mayor or his designee, the city planner, the permit director and the city engineer.

(2) *Quality*. Postconstruction runoff from any new development of one (1) acre or more shall comply with the following water quality provisions:

a. The first one and one quarter (1.25) inches of stormwater from each drainage area on the development site shall be managed (detained, retained, or filtered) on the same development site.

b. The quality of the first one and one quarter (1.25) inches shall be treated through best management practices (BMPs) to demonstrate the following:

1. For new development, a reduction in the total suspended solids load by 60%, based on the average annual rainfall, as compared to no treatment by BMPs.
2. For substantial improvements, a reduction in the total suspended solids load by 40%, based on the average annual rainfall, as compared to no treatment by BMPs.

8. Amend Ch. 7 – Buildings and Building Regulations, Article VIII. – Drainage, Division 2. – Storm Drainage, to add a new Sec. 7-232. – Erosion and sediment control during construction, to read as follows:

Sec. 7-232. – Erosion and sediment control during construction.

Before any grading or other earthwork that affects a land area larger than 1,000 square feet, the person performing such earthwork shall submit an erosion control plan. The plan shall be designed to prevent sediment from leaving the site during storms up to and including the 100-year storm and recover the ground after construction or other work to prevent or minimize erosion.

ADOPTED this 13th day of July, 2021.

Leslie Denham
President of the Council
Councilwoman, District A

Greg Cromer
Mayor

Thomas P. Reeves
Council Administrator

DELIVERED 7/14/21
3:15 pm to the Mayor
RECEIVED 7/16/21
9:30 am from the Mayor