AN ORDINANCE OF THE NORTH LOGAN CITY COUNCIL AMENDING TITLE 10A – FLOOD DAMAGE PREVENTION

WHEREAS, the City Council of the City of North Logan, Utah, adopted and passed the Code of Revised Ordinances of the City of North Logan on March 16, 1989, which Code was published and effective on March 20, 1989; and

WHEREAS, said Code includes Title 10 Fire, Health, and Public Safety, which includes the city's regulations to help protect human life and health, and to protect property; and

WHEREAS, one of the natural disaster risks that exists in North logan City is the risk of flooding; and

WHEREAS, the Legislature of the State of Utah Code § 10-3-701; § 10-8-Part 1 Section 38; and § 10-8-Part 1 Section 84 delegated the responsibility of local governmental units to adopt regulations designed to minimize flood losses; and

WHEREAS, the NFIP is managed by the Federal Emergency Management Agency (FEMA) and is delivered to the public by a network of more than 50 insurance companies; and

WHEREAS, flood insurance is available to anyone living in one of the 23,000 participating NFIP communities; and

WHEREAS, it is vital that the City's residents have access to flood insurance; and

WHEREAS, the City must adopt floodplain management measures that meet or exceed minimum National Flood Insurance Program (NFIP) regulations, as determined by the Department of Homeland Security's Federal Emergency Management Agency (FEMA) Regional Office; and

WHEREAS, the North Logan City Planning Commission provided adequate public notice and held a public hearing regarding the proposed changes to Title 10A Flood Damage Prevention during their regular meeting held on January 4, 2023; and

WHEREAS, after careful consideration the City Council has determined that it is in the best interest of the health, safety and welfare of the City's residents to amend Title 10A Flood Damage Prevention of the North Logan Code of Ordinances.

NOW, THEREFORE, the North Logan City Council hereby adopts, passes and publishes the following:

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BE IT ORDAINED by the City Council of the City of North Logan, Utah as follows (highlighted portion changed or added, crossed through items deleted):

SECTION I: CHANGES to Title 10A – FLOOD DAMAGE PREVENTION

10A Flood Damage Prevention

10A-101 Statutory Authorization, Findings Of Fact, Purpose And Methods

A) <u>Statutory Authorization</u>. The city of North Logan, Utah elects to comply with the requirements of the National Flood Insurance Act of 1968 (P.L. 90-488, as amended). The National Flood Insurance Program (NFIP) is a voluntary program administered by the Federal Emergency Management Agency

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(FEMA), a component of the U.S. Department of Homeland Security, and North Logan's community officials have elected to join the program, participate, and enforce this Flood Damage Prevention Ordinance and the requirements and regulations of the NFIP. The National Flood Insurance Program NFIP, established in the aforesaid act, provides that areas of the city having a special flood hazard be identified by the Federal Emergency Management Agency FEMA, and that floodplain management measures be applied in such flood hazard areas. The National Flood Insurance Program was broadened and modified with the passage of the Flood Disaster Protection Act of 1973 and other legislative measures. It was further modified by the National Flood Insurance Reform Act of 1994. The National Flood Insurance Program NFIP is administered by the Federal Emergency Management Agency FEMA, a component of the U.S. Department of Homeland Security. Furthermore, North Logan City may elect to administer the Flood Damage Prevention Ordinance to areas not identified as Special Flood Hazard Areas (SFHAs) by FEMA on the community's effective Flood Insurance Rate Map (FIRM), if the community has documentation to support that there is an inherent risk of flooding in such areas.

B) Findings of Fact

- 1) The flood hazard areas of North Logan City, Utah are subject to periodic inundation by flood waters, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare of the inhabitants of North Logan City.
- 2) These flood losses are created caused by:
 - i) the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities,
 - ii) the occupancy of flood hazards areas by uses structures vulnerable to floods and hazardous to other lands because they are inadequately elevated, flood-proofed or otherwise protected from flood damage, and
 - iii) uses deemed unsuitable for floodplain areas or that do not account for the increased flood risk.
- C) <u>Statement of Purpose</u>. It is the purpose of this ordinance to promote the public health, safety and general welfare of the community and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:
 - 1) Protect human life and health;
 - 2) Minimize public expenditures on of public money for costly flood control projects;
 - 3) Minimize the need for rescue and relief efforts associated with flooding and are generally undertaken at the expense of the general public;
 - 4) Minimize prolonged business interruptions caused by flooding;
 - 5) Minimize damage to public infrastructure, including but not limited to facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in floodplains that are susceptible to flooding;
 - 6) Protect and safeguard the welfare and safety of first responders should an emergency response is needed;
 - 7) 6) 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 future flood blight areas; and
 - 8) 7) Promote Ensure that potential buyers are notified if properties are that property is in a flood area.

D) Methods of Reducing Flood Losses

- 1) In order to accomplish its purposes, this ordinance applies uses the following methods:
- 2) Restricts or prohibits uses that are dangerous to health, safety, or property in times of flooding, or cause excessive increases in flood heights or velocities;
- 3) Require that uses vulnerable to floods, including facilities that which serve such uses, be protected against flood damage at the time of initial construction;
- 4) Controls the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters;

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- 5) Controls filling, grading, dredging and other developments that which may increase flood damage; and
- 6) Prevents or regulates the construction of flood barriers that which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

10A-200 Definitions

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

- 1) 100-Year Flood means a flood having a recurrence interval that has a 1-percent chance of being equaled or exceeded during any given year (1-percent-annual-chance flood). The terms "100-hundred-year flood" and "1-percent-annual-chance flood" are synonymous. The term does not imply that the flood will necessarily happen once every 100 hundred years. Mandatory flood insurance requirements may apply.
- 2) **100-Year Floodplain** means the area of land susceptible to being inundated due to the occurrence of a 1-percent-annual-chance flood.
- 3) **500-Year Flood** means a flood having a recurrence interval that has a 0.2-percent chance of being equaled or exceeded during any given year (0.2-percent-annual-chance flood). The term does not imply that the flood will necessarily happen once every 500 years and mandatory flood insurance requirement generally does not apply.
- 4) **500-Year Floodplain** means the area of land susceptible to being inundated due to the occurrence of a 0.2-percent-annual-chance flood.
- 5) Accessory Structure is a structure that is on the same parcel of property as a principal structure. Its use is incidental to the use of the principal structure the ownership of the accessory structure is the same owner as of the principal structure. An accessory structure is a non-residential structure of low value that is used solely for the parking of vehicles and storage of tools, materials, or equipment. No human habitation is allowed within an accessory structure.
- 6) *Addition* is any improvement that expands the enclosed footprint or increases the square footage of an existing structure. This includes lateral additions added to the side, front, or rear of a structure; vertical additions added on top of a structure; and enclosures added underneath a structure.
- 7) **Alluvial Fan Flooding** means flooding occurring on the surface of an alluvial fan or similar landform that originates at the apex. It is characterized by high-velocity flows; active processes of erosion, sediment transport, and deposition; and unpredictable flow paths.
- 8) *Apex* means a point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.
- 9) Appurtenant Structure see Accessory Structure.
- 10) 1) Area of Future-Conditions Flood Hazard means the land area that would be inundated by the 1-percent-annual-chance (100-year) flood, based on future-conditions hydrology.
- 11) 2) Area of Shallow Flooding means a designated AO, AH, AR/AO, AR/AH, or VO zone on a community's Flood Insurance Rate Map (FIRM) with a 1 percent or greater annual chance of flooding to an average depth of 1 to 3 feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.
- 12) 3) Area of Special Flood-Related Erosion Hazard is the land within a community that which is most likely to be subject to severe flood-related erosion losses. The area may be designated as Zone E on the Flood Hazard Boundary Map (FHBM). After the detailed evaluation of the special flood-related erosion hazard area; in preparation for publication of the FIRM, Zone E may be further refined.
- 13) 4) Area of Special Flood Hazard is the land in the flood plain within a community subject to a 1 percent or greater chance of flooding in any given year. The area may be designated as Zone A on the FHBM. After detailed ratemaking has been completed in preparation for publication of the FIRM flood

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insurance rate map, Zone A usually is refined into Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, or V1-30, VE, or V. For purposes of these regulations, the term "special flood hazard area" is synonymous in meaning with the phrase "area of special flood hazard".

- 14) 5) Base Flood means the flood having a one (1) percent chance of being equaled or exceeded in any given year.
- 15) 6) Base Flood Elevation (BFE) is the water surface elevation of the one (1) percent annual chance flood event. It is the height in relation to mean sea level expected to be reached by the waters of the base flood at pertinent points in the floodplains of coastal and riverine areas. It is also the elevation shown on the FIRM and found in the accompanying Flood Insurance Study (FIS) for Zones A, AE, AH, A1-A30, AR, V1-V30, or VE that indicates the water surface elevation resulting from the flood that has a 1-percent chance of equaling or exceeding that level in any given year.
- 16) 7) Basement means any area of the building having its floor subgrade (below ground level) on all sides. A walkout basement that does not require a step up to grade is not considered a basement.
- 17) **Best Available Data is** existing flood hazard information adopted by a community and reflected on an effective FIRM, FBFM, and/or within an FIS report; or draft or preliminary flood hazard information supplied by FEMA or from another source. Other sources may include, but are not limited to, state, other federal agencies, or local studies, the more restrictive of which would be reasonably used by the community.
- 18) 8) 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 supporting foundation system. Any walls below the lowest floor in a building in a V or VE Zone should give way under wind and water loads without causing collapse, displacement, or other damage to the elevated portion of the building of the supporting pilings or columns. Breakaway walls apply only to V or VE Zones.
- 19) 9) Building: see Structure.
- 20) *Channelization* means the artificial creation, enlargement, realignment, or alteration of a stream channel's slope, shape, or alignment. Streambank restoration may be deemed as channelization.
- 21) *Code of Federal Regulations (CFR)* is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government.
- 22) Conditional Letter of Map Revision (CLOMR) is FEMA's comment on a proposed project that would, upon construction, affect the hydrologic and/or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective BFEs, and/or the SFHA. The letter does not revise an effective map; it indicates whether the project, if built as proposed, would be recognized by FEMA.
- 23) *Conditional Letter of Map Revision Based on Fill (CLOMR-F)* is FEMA's comment on a proposed structure or property. The letter does not revise an effective map; it indicates whether the project, if built as proposed, would be removed from the floodplain.
- 24) *Crawlspace* means an under-floor space that has its interior floor area (finished or not) no more than 4 feet from the bottom floor joist the next higher floor elevation, designed with proper openings that equalize hydrostatic pressures of flood water, and is not used for habitation.
- 25) *Critical Facility* means a facility or building where even a slight chance of flooding is too great a threat. Typical critical facilities include hospitals, fire stations, police stations, schools, storage of critical records, assisted living and similar facilities.
- 26) *Deed Restriction* refers to a clause in a deed that limits the future use of the property in some respect. Deed restrictions may impose a vast variety of limitations and conditions. For example, they may limit the density of buildings, dictate the types of structures that can be erected, or prevent buildings from being used for specific purposes or from being used at all.

- 27) **Detached Garage** is a building that is used solely for storage of materials or vehicle parking for up to four housing occupants. If a detached garage is designed or used for habitation or conducting business, or has multiple stories, then the building is not considered a detached garage under the NFIP.
- 28) 10) Development means any human-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, demolition, excavation or drilling operations, or storage either temporary or permanent of equipment or materials.
- 29) *Elevated Building* is a non-basement building built, in the case of a building in Zone A1-30, AE, A, A99, AR, AO, AH, B, C, X and D, to have the top of the elevated floor above the ground level by means of pilings, columns (post and piers), or shear walls parallel to the flow of the water and adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of a building in Zone A1-30, AE, A, A99, AR, AO, AH, B, C, X and D, an "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
- 30) *Enclosure* refers to an enclosed walled-in area below the lowest floor of an elevated building. Enclosures below the BFE may only be used for building access, vehicle parking, and storage.
- 31) 11) Erosion means the process of the gradual wearing away of land masses by wind, water, or other natural agents. This peril is not per se covered under the Program.
- 32) 12) Existing Construction refers to means for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. "Existing construction" may also be referred to as "Existing Structures."
- 33) 13) Existing 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 pads) is completed before the effective date of the floodplain management regulations adopted by a community.
- 34) 14) Existing structures: see Existing Construction.
- 35) 45) Expansion to an Existing Manufactured Home Park or Subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufacturing homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).
- 36) **FEMA** means the Federal Emergency Management Agency.
- 37) *Fill* refers to the placement of materials, such as dirt, sand, or rock to elevate a structure, property, or portion of a property above the natural elevation of the site, regardless of where the material was obtained from. The common practice of removing unsuitable material and replacing with engineered material is not considered fill if the elevations are returned to the existing conditions. Any fill placed or used prior to the area being mapped as a flood hazard area is not deemed as fill.
- 38) 16) *Flood or Flooding* means:
 - a) A general and temporary condition of partial or complete inundation of normally dry land areas from:
 - i) The overflow of inland or tidal waters.
 - ii) The unusual and rapid accumulation or runoff of surface waters from any source.
 - b) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in this ordinance paragraph a(ii) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.
 - c) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a

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severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in this ordinance paragraph a(i) of this definition.

- 39) 17) Flood Elevation determination means a determination by the Administrator of the water surface elevations of the base flood, that is, the flood level that has a one percent or greater chance of occurrence in any given year. Flood elevation determination means a determination by the Administrator of the water surface elevations of the base flood, that is, the flood level that has a one (1) percent or greater chance of occurrence in any given year.
- 40) *Flood Insurance Manual* is the document FEMA produces twice a year and is used to write flood insurance policies underwritten by the NFIP. The document contains definitions, policy rates, coverage and limitations, application and insurance policy forms.
- 41) 18) Flood Insurance Rate Map (FIRM) means an official map of a community, on which the Administrator has delineated both the SFHAs special hazard areas and the risk premium zones applicable to the community.
- 42) 19) Flood Insurance Study (FIS) or Flood Elevation Study means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.
- 43) *Floodplain Development Permit* is a community issued permit or document that is used for any development that occurs within an SFHA identified by FEMA or the community. It is used to address the proposed development to ensure compliance with the community's ordinance.
- 44) 20) Flood Plain or Flood-Prone Area means any land area susceptible to being inundated by water from any source whether or not identified by FEMA (see definition of "Flooding").
- 45) *Floodplain Management* means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works, mitigation plans, and floodplain management regulations.
- 46) *Floodplain Management Regulations* means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for flood damage prevention and reduction.
- 47) *Flood Opening* refers to an opening in the wall of an enclosed structure that allows floodwaters to automatically enter and exit the enclosure. Refer to FEMA Technical Bulletin 1.
- 48) *Flood Protection System* means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the area within a community subject to an SFHA and to reduce the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized, flood modifying works are those constructed in conformance with sound engineering standards. FEMA only accredits levees, both private and public, that have been certified by a professional engineer or firm in which the certification shows that the levee have met and continue to meet the minimum regulatory standards cited in Title 44, Chapter 1, Section 65.10 of the Code of Federal Regulations (44 CFR 65.10).
- 49) 21) Flood Proofing means any combination of structural and non-structural additions, changes, or adjustments to structures that which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents. Floodproofing can either be accomplished in the form of dry floodproofing in which the structure is watertight below the levels that need flood protection, or wet floodproofing in permanent or contingent measures applied to a structure that prevent or provide resistance to damage from flooding, while allowing floodwaters to enter the structure or area.
- 50) 22) *Floodway:* see Regulatory Floodway.

- 51) 23) *Floodway Encroachment Lines* mean the lines marking the limits of floodways on Federal, State and local flood plain maps.
- 52) 24) Freeboard means a factor of safety usually expressed in feet above a flood level for purposes of flood plain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.
- 53) 25) Functionally Dependent Use means a development that use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities. It, but does not include long-term storage or related manufacturing facilities.
- 54) 26) Highest Adjacent Grade (HAG) means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure. In AO Zones, the highest adjacent grade is utilized by comparing the lowest floor elevation to that of the highest adjacent grade and the depth of the AO Zone.
- 55) 27) *Historic Structure* means any structure that is:
 - a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
 - b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
 - c) Individually listed on a state inventory of historic places in states with historic reservation programs which have been approved by the Secretary of the Interior; or
 - d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - i) By an approved state program as determined by the Secretary of the Interior or
 - ii) Directly by the Secretary of the Interior in states without approved programs.
- 56) Letter of Map Amendment (LOMA) means an official amendment, by letter, to an effective FIRM. A LOMA establishes a property's location in relation to the SFHA. It is usually issued because a property or structure has been inadvertently mapped as being in the floodplain, when the property or structure is actually on natural high ground above the BFE.
- 57) Letter of Map Revision (LOMR) means FEMA's modification or revision to an entire or portion of the effective FIRM, or Flood Boundary and Floodway Map, or both. LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective BFEs, or the SFHA.
- 58) Letter of Map Revision Based on Fill (LOMR-F) means FEMA's amendment, by letter, to an effective FIRM where fill was brought in or used to elevate a property, portion of property or structure above the BFE.
- 59) 28) 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.
- 60) 29) Levee System means a 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.
- 61) Lowest Adjacent Grade (LAG) means the lowest natural elevation of the ground surface prior to construction next to the proposed walls of a structure. For an existing structure, it means the lowest

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point where the structure and ground touch, including but not limited to attached garages, decks, stairs, and basement windows.

- 62) 30) 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 enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of CFR Sec. 60.3.
- 63) 31) Manufactured Home means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle"; however, a manufactured home may be used for both residential and non-residential use.
- 64) 32) *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.
- 65) 33) *Map* means the Flood Hazard Boundary Map (FHBM) or the Flood Insurance Rate Map (FIRM) for a community issued by FEMA the Agency.
- 66) 34) Mean Sea Level means, for purposes of the NFIP National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, or other datum, to which BFEs base flood elevations shown on a community's FIRM Flood Insurance Rate Map are referenced.
- 67) Mixed Use Structures are structures with both a business and a residential component, but where the area used for business is less than 50 percent of the total floor area of the structure.
- 68) 35) New Construction means, for the purposes of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, new construction means structures for which the start of construction commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.
- 69) 36) 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 pads) is completed on or after the effective date of floodplain management regulations adopted by a community.
- 70) **No-Rise Certifications** are formal certifications signed and stamped by a professional engineer licensed to practice in the state, demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that a proposed development will not result in any increase (0.00 feet) in flood levels within the community during the occurrence of a base flood event.
- 71) *Physical Map Revision* (*PMR*) is FEMA's action whereby one or more map panels are physically revised and republished.
- 72) 37) 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; and
 - d) Designed primarily, not for use as a permanent dwelling but, as temporary living quarters for recreational, camping, travel, or seasonal use.
- 73) 38) Regulatory 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 a designated height.
- 74) *Riverine* means relating to, formed by, or resembling a river (including tributaries), stream, brook, creek, etcetera, which can be intermittent or perennial.

- 75) Section 1316 refers to the section of the National Flood Insurance Act of 1968, as amended, which provides for the denial of flood insurance coverage for any property that the Administrator finds has been declared by a duly constituted State or local authority to be in violation of State or local floodplain management regulations. Section 1316 is issued for a property, not a property owner, and remains with the property even after a change of ownership.
- 76) 39) Special Flood Hazard Area: see "Area of Special Flood Hazard".
- 77) 40) *Special Hazard Area* means an area having special flood, mudslide (i.e., mudflow), or flood-related erosion hazards, and shown on an FHBM or FIRM as Zone A, AO, A1-30, AE, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, A99, AH, VO, V1-30, VE, V, M, or E.
- 78) 41) Start of Construction (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. 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 placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; 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 a building, whether or not that alteration affects the external dimensions of the building.
- 79) 42) *Structure* means, for floodplain management purposes, a walled and roofed building, culvert, bridge, dam, or including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home. Structure, for insurance purposes, means:
 - a) A building with two or more outside rigid walls and a fully secured roof, that is affixed to a permanent site
 - b) A manufactured home ("a manufactured home," also known as a mobile home, is a structure: built on a permanent chassis, transported to its site in one or more sections, and affixed to a permanent foundation); or
 - c) A travel trailer without wheels built on a chassis and affixed to a permanent foundation, that is regulated under the community's floodplain management and building ordinances or laws.
 - For insurance the latter purposes, "structure" does not mean a recreational vehicle or a park trailer or other similar vehicle, except as described in paragraph (c) of this definition, or a gas or liquid storage tank.
- 80) 43) Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before pre-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.
- 81) 44) Substantial improvement means any 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:
 - a) Any project for 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
 - b) Any alteration of a "historic structure", if provided that the alteration will not preclude the structure's continued designation as a "historic structure."

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- 82) 45) *Variance* means a grant of relief by a community from the terms of a flood plain management regulation.
- 83) 46) *Violation* means the failure of a structure or other development to be fully compliant with the community's flood plain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in Sections 44 CFR 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.
- 84) 47) Water Surface Elevation means the height, in relation to the North American Vertical Datum (NAVD) of 1988 National Geodetic Vertical Datum (NGVD) of 1929, (or other datum, where specified) of floods of various magnitudes and frequencies, such as the 1-percent-annual-chance flood event, in the flood plains of coastal or riverine areas.
- 85) *Watercourse* means the channel and banks of an identifiable water in a creek, brook, stream, river, ditch or other similar feature.

10A-300 General Provisions

10A-301 Lands To Which This Ordinance Applies

The ordinance shall apply to all areas of special flood hazard identified by FEMA within the jurisdiction of North Logan City, Utah.

10A-302 Basis For Establishing The Areas Of Special Flood Hazard

The areas of special flood hazard identified by the FEMA Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for North Logan City, Utah" dated May 24, 2011, with accompanying current North Logan City Flood Insurance Rate Maps and Flood Boundary Floodway Maps (FIRM and FBFM) and any revisions thereto are hereby automatically adopted by reference and declared to be a part of this ordinance.

10A-302.1 Use of Best Available Data

The community has elected to adopt Best Available Data, defined in **10A-301 Lands To Which This Ordinance Applies**, to regulate floodplain development in addition to utilizing the effective FIRMs, FIS, and/or FBFM. Where Best Available Data contradicts the FIRMs, FIS, and/or the FBFM, the more restrictive data shall be utilized.

10A-303 Establishment Of Development Permit

A Floodplain Development Permit shall be required to ensure conformance with the provisions of this ordinance.

10A-304 Compliance

No structure or developments including buildings, recreation vehicles, or manufactured homes or land shall hereafter be located, altered, or have its use changed without full compliance with the terms of this ordinance and other applicable regulations. Nothing herein shall prevent North Logan City from taking such lawful action as is necessary to prevent or remedy any violations.

10A-305 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 ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

10A-306 Interpretation

In the interpretation and application of this ordinance, all provisions shall be:

- considered as minimum requirements;
- liberally construed in favor of the governing body; and
- deemed neither to limit nor repeal any other powers granted under State statutes.

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10A-307 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 considerations. On rare occasions greater floods can and will occur and flood heights may be increased by human-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the community or any official or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made there under.

10A-308 Severability

If any section, provision, or portion of this ordinance is adjudged unconstitutional or invalid by a court, the remainder of the ordinance shall not be affected.

10A-309 Automatic Adoption

North Logan City automatically adopts effective FEMA Flood Insurance Studies (FIS), and automatically adopts effective FEMA Flood Insurance Rate Maps.

10A-310 Stop Work Order

- A) Authority. Whenever the floodplain administrator or other community official discovers any work or activity regulated by this ordinance being performed in a manner contrary to the provision of this ordinance, the floodplain administrator is authorized to issue a stop work order.
- B) Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which the cited work will be permitted to resume.
- C) Unlawful continuance. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as prescribed by local or state law including but not limited to the penalties outlined in 10A-311 Penalties of Noncompliance.

10A-311 Penalties of Noncompliance

In accordance with Section 59.2(b) of CFR 44, Chapter 1, of the NFIP regulation, to qualify for the sale of federally subsidized flood insurance, a community must adopt floodplain management regulations that meet or exceed the minimum standards of Section 60. "These regulations must include effective enforcement provisions." In accordance with Section 60.1(b) of CFR 44, Chapter 1, of the NFIP regulations, "These regulations must be legally-enforceable, applied uniformly throughout the community to all privately and publicly owned land within flood-prone (i.e. mudflow) or flood-related erosion areas, and the community must provide that the regulations take precedence over less restrictive conflicting local laws, ordinances, or codes."

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violation of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) may constitute a misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall upon written notice be issued a fine of \$100 per day per violation. These administrative fines shall remain in effect until the violation is corrected.

10A-400 Administration

10A-401 Designation Of The Floodplain Administrator

The North Logan City Public Works Director Engineer is hereby appointed the Floodplain Administrator to administer and implement the provisions of this ordinance and other appropriate sections of the NFIP

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Regulations and 44 CFR (National Flood Insurance Program Regulations) pertaining to floodplain management.

10A-402 Duties And Responsibilities Of The Floodplain Administrator

Duties and responsibilities of the Floodplain Administrator shall include, but not be limited to, the following:

- A) Uphold the goals of the community and the NFIP to reduce risk when possible and increase the community's resistance to future disasters.
- B) A) Maintain and hold open for public inspection all records pertaining to the provisions of this ordinance, including the actual elevation of the lowest floor (including basement or crawlspace) of all new or substantially improved structures and any floodproofing certificates, including the data supporting such certificates.
- C) Maintain and hold open for public inspection maps that identify and locate the boundaries of the SFHAs to which this ordinance applies, including, but not limited to, the FIRM.
- D) B) Review development proposals permit application to determine whether a proposed building site, including sites designed for the placement of manufactured homes, will be reasonably safe from flooding.
- E) C) Review, approve or deny all applications for development permits required by adoption of this ordinance.
- F) D) Review permits for proposed development. Ensure to assure that all necessary permits have been obtained from those Federal, State or local governmental agencies (including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334 and the Endangered Species Act of 1973) from which prior approval is required.
- G) E) Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation.
- H) F) Notify, in riverine situations, adjacent communities and the State Coordinating Agency which is the Utah National Floodplain Coordinator, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA the Federal Emergency Management Agency.
- I) G) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.
- J) H) When BFE base flood elevation data has not been provided by FEMA in accordance with Chapter 302, the Floodplain Administrator shall obtain, review, and reasonably utilize any BFE base flood elevation data and floodway data available from a Federal, State or other source including data provided by the applicant, in order to administer the provisions of this ordinance Chapter 10A 500.
- K) When a regulatory floodway has not been designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30, AE, and AH on the community's FIRM, unless it is demonstrated 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 1.00* feet at any point within the community unless the community has adopted higher standard options.
- L) Under the provisions of 44 CFR Chapter 1, Section 65.12 of the NFIP Regulations, a community may approve certain development in Zones A1-30, AE, and AH on the community's FIRM, which increases the water surface elevation of the base flood by more than 1.00* foot, provided that the community first meets the requirements of Section 65.12 for a conditional FIRM revision through FEMA's CLOMR process.
- M) If the project is determined or reasonably believed to cause an adverse effect on the BFE(s), boundaries of the floodplain or any insurable structures, technical justification for the proposed development shall be submitted and the community may require a CLOMR or LOMR to be submitted prior to the permit approval or as a requirement of the permit.

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N) Fill placed within the SFHA shall result in no net loss of natural floodplain storage or increase in water surface elevations during the base flood. The volume of the loss of floodwater storage due to filling in the SFHA shall be offset by providing an equal volume of flood storage by excavation or other compensatory measures at or adjacent to the development site.

10A-403 Permit Procedures

Application for a Development Permit shall be presented to the Floodplain Administrator on forms furnished by him/her and may include, but not be limited to:

- A) Duplicated plans in duplicate drawn to scale showing the location, dimensions, and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes, and the location of the foregoing in relation to SFHAs areas of special flood hazard.:
- B) A) Elevation (in relation to mean sea level), of the lowest floor (including basement and crawlspace) of all new and substantially improved structures, if applicable;
- C) B) Elevation (in relation to mean sea level), to which any nonresidential structure (if applicable) shall be flood-proofed;
- D) C) A certificate from a registered professional engineer or architect that the nonresidential flood-proofed structure (if applicable) shall meet the flood-proofing criteria of this ordinance and the NFIP Regulations Chapter 10A 502 (B);
- E) Description of the extent to which any watercourse or natural drainage will be altered or relocated because a result of proposed development, if applicable;
- F) E) Maintain a record of all such information in accordance with Chapter 10A-402 (A). At the community's discretion, the community may charge a fee for issuance of floodplain development permits; and
- G) Copies of all floodplain development permits and the associated documents shall become property of the community and a permanent record.

Approval or denial of a Development Permit by the Floodplain Administrator shall be based on all of the provisions of this ordinance and the following relevant factors:

- 1. The danger to life and property due to flooding or erosion damage;
- 2. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- 3. The danger that materials may be swept onto other lands to the injury of others;
- 4. The compatibility of the proposed use with existing and anticipated development;
- 5. The safety of access to the property in times of flood for ordinary and emergency vehicles;
- 6. The costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;
- 7. 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;
- 8. The necessity to the facility of a waterfront location, where applicable;
- 9. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
- 10. The relationship of the proposed use to the comprehensive plan for that area; and
- 11. Volumetric calculations demonstrating compensatory storage for all fill activities in the floodplain.

10A-403.1 Use of Elevation Certificates

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The city/town/county requires that the following Elevations Certificates be completed for any new residential or non-residential building construction:

- 1. Proposed Conditions: A proposed conditions Elevation Certificate is required to be completed by a professional and licensed engineer, surveyor, or architect as part of the Floodplain Permit package.
- 2. Finished Construction: a finished construction Elevation Certificate is required to be completed by a professional and licensed engineer, surveyor, or architect once the structure is completed, utilities are installed, and grading and landscaping has been completed.

10A-404 Variance Procedures

- A) The land-use appeal authority as established by the community shall hear and render judgment on requests for variances from the requirements of this ordinance.
- B) The Appeal Board shall hear and render judgment on an appeal only when it is alleged there is an error in any requirement, decision, or determination made by the Floodplain Administrator in the enforcement or administration of this ordinance.
- C) Any person or persons aggrieved by the decision of the Appeal Board may appeal such decision in the courts of competent jurisdiction.
- D) The Floodplain Administrator shall maintain a record of all actions involving an appeal and shall report variances to the Federal Emergency Management Agency and the State Office of Emergency Management upon issuing a variance.
- E) Variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the relevant factors in Chapter 403 have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.
- F) Upon consideration of the factors noted above and the intent of this ordinance, the Appeal Board may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this ordinance [Chapter 10A 100(C)].
- G) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- H) Variances may be issued for the repair or rehabilitation of historic structures upon a 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.
- I) Prerequisites for granting variances:
 - 1) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - 2) Variances shall only be issued upon:
 - a) showing a good and sufficient cause;
 - b) determination that failure to grant the variance would result in exceptional hardship to the applicant, and
 - c) determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, 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 that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

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- A) Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that:
 - 1) the criteria outlined in Chapter 10A-404 paragraphs A I are met, and
 - 1. the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

10A-404 Requirement to Submit New Technical Data

- A) The property owner or developer shall notify FEMA by submittal of a LOMR within 6 months of project completion when an applicant had obtained a CLOMR from FEMA or when development altered a watercourse, modified floodplain boundaries, or modified BFE.
- B) The property owner or developer shall be responsible for preparing technical data to support the CLOMR or LOMR application and paying any processing or application fees to FEMA. The property owner or developer is responsible for submitting the CLOMR and LOMR to FEMA and shall provide all necessary data to FEMA if requested during the review process to ensure the CLOMR or LOMR is issued.
- C) The Floodplain Administrator shall be under no obligation to sign the Community Acknowledgement Form, which is part of the CLOMR/LOMR application, until the applicant demonstrates that the project will or has met the requirements of this ordinance and all applicable state federal, and local laws.

10A-406 Watercourse Alterations

- A) No alteration to a channel, river, stream, drainage way, or other watercourse shall diminish the flood-carrying capacity of that watercourse. The altered or relocated watercourse shall have the same or greater capacity as the original watercourse.
- B) All proposals for a watercourse alteration require submittal of a floodplain development permit. The applicant shall submit a set of plans and calculations prepared by a registered professional engineer of the proposed alteration and its effect on flows. An applicant shall provide the following information. Additional information may be submitted and requested:
 - 1) Topographic map of the project area.
 - 2) A comparison of the existing and proposed channel capacity, including engineering calculations prepared by a registered professional engineer.
 - 3) A description of the proposed alteration extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.
 - 4) Land use of adjacent properties.
 - 5) Description of any obstructions.
 - 6) Dimensions, specifications, and locations of any structures (bridges, culverts, water crossing, dams, dikes, levees, detention basins, etcetera).
 - 7) Photos of the area.
- C) Prior to approval of the floodplain development permit, the applicant shall:
 - 1) Submit an application and obtain a CLOMR from FEMA.
 - 2) Notify adjacent communities, property owners and the and the State Coordinating Agency, prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Floodplain Administrator and to FEMA.
 - 3) Require that maintenance is provided within the altered or relocated portion of the watercourse so that the flood-carrying capacity is not diminished.

10A-500 Provisions For Flood Hazard Reduction

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10A-501 General Standards

In all areas of special flood hazards the following provisions are required for all new construction and substantial improvements:

- A) All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
- B) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;
- C) All new construction or substantial improvements shall be constructed with materials resistant to flood damage;
- D) All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- E) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- F) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the systems into flood waters; and
- G) On-site waste disposal systems shall be designed or located to avoid impairment to them or contamination from them during flooding.

10A-501.1 Temporary Structures

All temporary structures associated with festivals, carnivals or other temporary uses placed on sites within Zones A1-30, AE, AH, AO, and A on the community's FIRM or area that has been identified as a flood hazard area through the use of Best Available Data are required to:

- A) Be on the site for fewer than 30 consecutive days;
- B) Have a plan in place for the removal of the structure including a list of necessary supplies, tools, and resources needed to achieve the removal; and
- C) Be capable of being removed within 6 hours.

10A-501.2 Temporary Storage

All temporary storage of materials or equipment on sites within Zones A1-30, AE, AH, AO, and A on the community's FIRM or area that has been identified as a flood hazard area through the use of Best Available Data are required to:

- A) Be on the site for fewer than 90 consecutive days (recommended less than 30 days but not to exceed 180 days) and no more than 180 cumulative days within a calendar year;
- B) Have a plan in place for the removal of the equipment or materials including a list of necessary supplies, tools, and resources needed to achieve the removal; and
- C) Have proper documentation to support when the materials or equipment are moved on and off the site.

10A-501.3 Substantial Improvement

Any combination of repair, reconstruction, rehabilitation, addition, or improvement of a building or structure, if the cumulative cost of the entire project equals or exceeds 50 percent, unless a higher standard option is selected below, of the market value of the structure only (not of the structure and land value combined) before the improvement or repair is started then the work shall be considered as substantial improvement. If the structure has sustained substantial damage, any repairs are considered

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substantial improvements regardless of the actual repair work performed. The term does not, however, include either:

- A) Any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.
- B) Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

10A-501.4 Substantial Damage

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50 percent of the market value of the structure only, unless a higher standard option is selected, before the damage occurred. This term also applies to structures which have incurred any damage that equals or exceeds 50 percent of the structure's market value regardless of the actual repair work performed. When a structure or building has been determined as substantially damaged, any work or repair on said structure or building will be considered as substantial improvement and will be required to meet the development requirements set forth within this ordinance for substantial improvement.

10A-501.5 Substantial Improvement and Substantial Damage Determination

For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the applicable community officials and staff, shall:

- A) Estimate the market value, or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure only, not of land and building, before the start of construction of the proposed work. In the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made.
- B) Compare the cost to perform the improvement, the cost to repair a damaged building to its predamaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure.
- C) Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; the determination requires evaluation of previous permits issued for improvements and repairs as specified in **10A-501.3 Substantial Improvement**.
- D) Utilize FEMA's Substantial Improvement/Substantial Desk Reference when making any determination on Substantial Improvement and/or Substantial Damage.
- E) The substantial improvement regulations apply to all of the work that is proposed as the improvement, even if multiple permits are issued. Therefore, the determination of the cost of the improvement should consider all costs of all phases of the work before issuance of the first permit.
- F) Notify the applicant that if it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood, this ordinance is required.

10A-502 Specific Standards

In all SFHAs areas of special flood hazards and areas of known or suspected flood risk areas, where base flood elevation data has been provided as set forth in (i) Chapter 10A-302, (ii) Chapter 10A-402 paragraph J H, or (iii) Chapter 10A-503 (C), the following provisions are required:

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- A) Residential Construction. New construction and substantial improvement of any residential structure shall have the lowest floor (including basement), elevated to the BFE at least one foot above the base flood elevation. A registered professional engineer, architect, or land surveyor shall submit certified elevations a certification to the Floodplain Administrator that the standards of this ordinance paragraph are is satisfied.
- B) Nonresidential Construction. New construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) elevated to least one foot above the base flood level or together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure 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. 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 as outlined in this subsection. A record of such certification which includes the specific elevation (in relation to mean sea level) to which such structures are flood-proofed shall be maintained by the Floodplain Administrator.

If the use or occupancy of the building changes in the future to residential, then the dry floodproofing of the structure cannot be used when determining compliance of the structure to the residential construction of this ordinance. As such, the building will not be grandfathered into compliance and will be required to be brought into compliance with the residential construction requirements of this ordinance.

The development and construction of the structure must conform to the provision in FEMA/FIA-Technical Bulletins 1, 2, 10 and 11. Certification and documentation from a professional, licensed engineer or architect is required if the structure's lowest floor is built below the BFE.

- C) Enclosures: New construction and substantial improvements, with fully enclosed areas below the lowest floor that are to be used solely for parking of vehicles, building access, or storage in an area other than a basement, and are subject to flooding shall be 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 must meet or exceed the following minimum criteria:
 - 1) A minimum of two openings having a total net area of not less than 1 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 1 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.

The development and construction of the structure must conform with the provision in FEMA/Federal Insurance Administration (FIA)-Technical Bulletins 1 and 2. Certification and documentation from a professional, licensed engineer or architect is required if the structure's lowest floor is built below the BFE.

D) CRAWLSPACE: New construction and substantial improvements built on a crawlspace or sub-grade (below grade) crawlspace may be permitted if the development is designed and meets or exceeds the standards found in FEMA's Technical Bulletins 1, 2, and 11, which include but are not limited to the following:

- 1) The structure must be affixed to a permanent foundation, designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than 5 feet per second unless the design is reviewed by a qualified design professional, such as a registered architect or professional engineer.
- 2) The crawlspace is an enclosed area below the BFE and, as such, must have openings that equalize hydrostatic pressures by allowing the automatic entry and exit of floodwaters. The bottom of each flood vent opening can be no more than 1 foot above the LAG.
- 3) The crawlspace enclosure must have proper openings that allow equalization of hydrostatic pressure by allowing automatic entry and exit of floodwaters. To achieve this, a minimum of 1 square inch of flood opening is required per 1 square foot of the enclosed area subject to flooding.
- 4) Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the crawlspace used to elevate the building, but also any joists, insulation, piers, or other materials that extend below the BFE. Ductwork, in particular, must either be placed above the BFE or sealed from floodwaters.
- 5) Any building utility systems within the crawlspace must be elevated above the BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions.
- 6) The interior grade of a crawlspace below the BFE must not be more than 2 feet below the LAG.
- 7) The height of the below-grade crawlspace, measured from the lowest interior grade of the crawlspace floor to the bottom of the floor joist of the next higher floor cannot exceed 4 feet at any point.
- 8) There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event.
- 9) Buildings with below-grade crawlspaces will have higher flood insurance premiums than buildings that have the preferred crawlspace construction, with the interior elevation at or above the LAG.
- E) C) Manufactured Homes:
 - 1) Require that all manufactured homes to be placed within Zone A on a community's FHBM or FIRM shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.
 - 2) Require that manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE on the community's FIRM on sites outside of a manufactured home park or subdivision;) in a new manufactured home park or subdivision; in an expansion to an existing manufactured home park or subdivision; or in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the BFE, unless a higher standard option was selected, and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
 - 3) In A-1-30, AH, AO and AE Zones, require that manufactured homes to be placed or substantially improved in an existing manufactured home park to be elevated so that the lowest floor is at or above the BFE, unless a higher standard option was selected; or the chassis is supported by reinforced piers no less than 36 inches in height above grade and securely anchored.
- F) Recreational Vehicles: Require that recreational vehicles placed on sites within Zones A1-30, AH, and AE on the community's FIRM either:
 - 1) Be on the site for fewer than 180 consecutive days unless the community has elected a higher standard option and be fully licensed and ready for highway use;

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- a) 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.
- 2) Or meet the permit requirements of **10A-403 Permit Procedures**, and the elevation and anchoring requirements for "manufactured homes" of this section.

10A-503 Standards For Subdivision Proposals

- A) All subdivision proposals including the placement of manufactured home parks and subdivisions shall be consistent with the provisions Chapter 10A 101, Paragraphs B, C, and D of this ordinance.
- B) All proposals for the development of subdivisions including the placement of manufactured home parks and subdivisions shall meet Development Permit requirements of this ordinance Chapter 10A 303; Chapter 10A 403; and the provisions of Chapter 500 of this ordinance.
- C) BFE Base flood elevation data shall be generated for subdivision proposals and other proposed development including the placement of manufactured home parks and subdivisions, which are greater than 50 lots or 5 acres, whichever is lesser, if not otherwise provided pursuant to Chapter 10A 402, or Chapter 10A 402 Paragraph H of this ordinance.
- D) All subdivision proposals including the placement of manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.
- E) All subdivision proposals including the placement of manufactured home parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.

10A-503.1 Standards For Subdivision Access (Ingress-Egress)

New subdivision development proposals shall be designed, to the maximum extent practicable, so residential buildings sites, walkways, driveways, and roadways are located on land with a natural grade with elevation not less than the BFE and with dry land access.

10A-504 Standards For Areas of Shallow Flooding (AO/AH Zones)

Located within the SFHAs established in **10A-301 Lands To Which This Ordinance Applies**, are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of 1 to 3 feet where a clearly defined channel does not exist and where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:

- A) All new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least 2 feet if no depth number is specified). If the community has elected a freeboard standard, then the lowest floor elevation must be elevated above the highest adjacent grade above the depth number specified in feet on the community's FIRM (at least 2 feet if no depth number is specified) plus the freeboard height option selected below.
- B) All new construction and substantial improvements of non-residential structures:
 - 1) Have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least 2 feet if no depth number is specified). If the community has elected a freeboard standard, then the lowest floor elevation must be elevated above the highest adjacent grade above the depth number specified in feet on the community's FIRM (at least 2 feet if no depth number is specified) plus the freeboard height option selected below; or
 - 2) Together with attendant utility and sanitary facilities be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with

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structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.

- C) A registered professional engineer or architect shall submit a certification to the Floodplain Administrator that the standards of this Section.
- D) Require within Zones AH or AO adequate drainage paths around structures on slopes, to guide flood waters around and away from proposed structures.

10A-505 Floodways

Floodways located within SFHAs are extremely hazardous areas due to the velocity of flood waters that carry debris, potential projectiles, and erosion potential, the following provisions shall apply:

- A) Designate a regulatory floodway that will not increase the base flood level more than 1 foot.
- B) Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway 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 greater than 0.00 feet, unless higher standard option selected, in flood levels within the community during the occurrence of the base flood discharge.
- C) All new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article V in this ordinance.
- D) Under the provisions of 44 CFR Chapter 1, Section 65.12, of the NFIP Regulations, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in BFEs, provided that the community first applies for a conditional FIRM and floodway revision through FEMA.

10A-506 Properties Removed From The Floodplain By Fill

A Floodplain Development Permit shall not be issued for the construction of a new structure or addition to an existing structure on a property removed from the floodplain by the issuance of a FEMA Letter of Map Revision Based on Fill (LOMR-F), unless such new structure, or substantial improvement or addition complies with the following:

- A) Residential Construction: The lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), must be elevated to the elevation noted in 10A-502 (A) Residential Construction.
- B) Nonresidential Construction: The lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), must be elevated to the elevation noted in 10A-502 (B) Nonresidential Construction, or together with attendant utility and sanitary facilities be designed so that the structure or addition is watertight to at the elevation noted in 10A-502 (B) Nonresidential Construction with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.

10A-507 Standards For Critical Facilities

A Critical Facility is a structure or related infrastructure, but not the land on which it is situated, that if flooded may result in significant hazards to public health and safety or interrupt essential services and operations for the community at any time before, during and after a flood.

A) Classification of Critical Facilities. It is the responsibility of the community to identify and confirm that specific structures in their community meet the following criteria: (a) Essential Services; (b) Hazardous Materials; (c) At-risk Populations; and (d) Vital to Restoring Normal Services.

- 1) Essential services facilities include public safety, emergency response, emergency medical, designated emergency shelters, communications, public utility plant facilities, and transportation lifelines.
- 2) These facilities consist of:
 - a) Public safety (police stations, fire and rescue stations, emergency vehicle and equipment storage, and, emergency operation centers);
 - b) Emergency medical (hospitals, ambulance service centers, urgent care centers having emergency treatment functions, and non-ambulatory surgical structures but excluding clinics, doctors' offices, and non-urgent care medical structures that do not provide these functions);
 - (i) Designated emergency shelters;
 - (ii) Communications (main hubs for telephone, broadcasting equipment for cable systems, satellite dish systems, cellular systems, television, radio, and other emergency warning systems, but excluding towers, poles, lines, cables, and conduits);
 - (iii) Public utility plant facilities for generation and distribution (hubs, treatment plants, substations and pumping stations for water, power and gas, but not including towers, poles, power lines, buried pipelines, transmission lines, distribution lines, and service lines); and
 - (iv) Air Transportation lifelines (airports (municipal and larger), helicopter pads and structures serving emergency functions, and associated infrastructure (aviation control towers, air traffic control centers, and emergency equipment aircraft hangars).
- B) Specific exemptions to this category include wastewater treatment plants, non-potable water treatment and distribution systems, and hydroelectric power generating plants and related appurtenances.
- C) Public utility plant facilities may be exempted if it can be demonstrated to the satisfaction of the community that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same utility or available through an intergovernmental agreement or other contract) and connected, the alternative facilities are either located outside of the 100-year floodplain or are compliant with the provisions of this Article, and an operations plan is in effect that states how redundant systems will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the community on an as-needed basis upon request.
- D) Hazardous materials facilities include facilities that produce or store highly volatile, flammable, explosive, toxic and/or water-reactive materials. These facilities may include:
 - 1) Chemical and pharmaceutical plants (chemical plant, pharmaceutical manufacturing);
 - 2) Laboratories containing highly volatile, flammable, explosive, toxic and/or water-reactive materials;
 - 3) Refineries;
 - 4) Hazardous waste storage and disposal sites; and
 - 5) Above ground gasoline or propane storage or sales centers.
- E) Facilities shall be determined to be Critical Facilities if they produce or store materials in excess of threshold limits. If the owner of a facility is required by the Occupational Safety and Health Administration (OSHA) to keep a Material Safety Data Sheet (MSDS) on file for any chemicals stored or used in the work place, AND the chemical(s) is/are stored in quantities equal to or greater than the Threshold Planning Quantity (TPQ) for that chemical, then that facility shall be considered a Critical Facility. The TPQ for these chemicals is: either 500 pounds or the TPQ listed (whichever is lower) for the 356 chemicals listed under 40 CFR § 302 (2010), also known as Extremely Hazardous Substances (EHS); or 10,000 pounds for any other chemical. OSHA requirements for MSDS can be found in 29 CFR § 1910 (2010). The Environmental Protection Agency (EPA) regulation "Designation, Reportable Quantities, and Notification," 40 CFR § 302 (2010) and OSHA regulation "Occupational Safety and Health Standards," 29 CFR § 1910 (2010) are incorporated herein by reference and include the regulations in existence at the time of the promulgation of this ordinance, but exclude later amendments to or editions of the regulations.

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- F) Specific exemptions to this category include:
 - 1) Finished consumer products within retail centers and households containing hazardous materials intended for household use, and agricultural products intended for agricultural use.
 - 2) Buildings and other structures containing hazardous materials for which it can be demonstrated to the satisfaction of the local authority having jurisdiction by hazard assessment and certification by a qualified professional (as determined by the local jurisdiction having land use authority) that a release of the subject hazardous material does not pose a major threat to the public.
 - 3) Pharmaceutical sales, use, storage, and distribution centers that do not manufacture pharmaceutical products.
- G) These exemptions shall not apply to buildings or other structures that also function as Critical Facilities under another category outlined in this Article.
- H) At-risk population facilities include medical care, congregate care, and schools.
 - 1) These facilities consist of:
 - a) Elder care (nursing homes);
 - b) Congregate care serving 12 or more individuals (day care and assisted living);
 - c) Public and private schools (pre-schools, K-12 schools), before-school and after-school care serving 12 or more children);
- I) Facilities vital to restoring normal services including government operations. These facilities consist of:
 - 1) Essential government operations (public records, courts, jails, building permitting and inspection services, community administration and management, maintenance, and equipment centers);
 - 2) Essential structures for public colleges and universities (dormitories, offices, and classrooms only).
- J) These facilities may be exempted if it is demonstrated to the community that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same entity or available through an intergovernmental agreement or other contract), the alternative facilities are either located outside of the 100-year floodplain or are compliant with this ordinance, and an operations plan is in effect that states how redundant facilities will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the community on an as-needed basis upon request.

10A-508 504 Penalties For Non-Compliance

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violation of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a Class B misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined and serve any jail sentence imposed in accordance with prevailing municipal court schedules, for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent North Logan City from taking such other lawful action as is necessary to prevent or remedy any violation.

10A-600 CERTIFICATION

It is hereby found and declared by North Logan City that severe flooding has occurred in the past within its jurisdiction and will certainly occur within the future; that flooding is likely to result in infliction of serious personal injury or death, and is likely to result in substantial injury or destruction of property within its jurisdiction; in order to effectively comply with minimum standards for coverage under the NFIP; and in order to effectively remedy the situation described herein, it is necessary that this ordinance become effective immediately.

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Therefore, an emergency is hereby declared to exist, and this ordinance, being necessary for the immediate preservation of the public peace, health and safety, shall be in full force and effect from and after its passage and approval.

APPROVED;	
(North Logan Cit	y Official)
D. CCED	
PASSED:(date)	<u></u>
	do hereby certify that the above is a true and
correct copy of an ordinance duly adopted	do hereby certify that the above is a true and , (North Logan City)
at a regular meeting duly convened on	
	(date)
(City Recorder) (SEAL)	
EFFECTIVE:	
(date)	
Updated (date)	
	ent of any conflict between this ordinance and any other North the provisions of this Ordinance shall be controlling.
Ordinance are severable. If any such section invalid or unconstitutional by the valid judgments.	sections, paragraphs, sentences, clauses, and phrases of this ion, paragraph, sentence, clause, or phrase shall be declared dgment or decree of a Court of competent jurisdiction, such affect the validity or constitutionality of any of the remaining or phrases of this Ordinance.
	n the opinion of the City Council of North Logan, it is necessary y; therefore, this Ordinance shall take effect immediately upon y law.
ADOPTED AND PASSED by the City Co January, 2023	ouncil of the City of North Logan, Utah, this <u>18th</u> day of
	NORTH LOGAN CITY, A Utah Municipal Corporation
ATTEST:	By
Scott Bennett, City Recorder	