

Ordinance No 94

City of Greenbush Flood Ordinance

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SECTION 1.0 STATUTORY AUTHORIZATION, FINDINGS OF FACT AND PURPOSE

- 1.1 **Statutory Authorization:** The legislature of the State of Minnesota has, in Minnesota Statutes Chapter 103F and Chapter 462 delegated the responsibility to local government units to adopt regulations designed to minimize flood losses. Therefore, the City Council of the City of Greenbush, Minnesota, does ordain as follows.
- 1.2 **Purpose:**
 - 1.21 This ordinance regulates development in the flood hazard areas of the City of Greenbush. These flood hazard areas are subject to periodic inundation, which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base. It is the purpose of this ordinance to promote the public health, safety, and general welfare by minimizing these losses and disruptions.
 - 1.22 National Flood Insurance Program Compliance. This ordinance is adopted to comply with the rules and regulations of the National Flood Insurance Program codified as 44 Code of Federal Regulations Parts 59 - 78, as amended, so as to maintain the community's eligibility in the National Flood Insurance Program.
 - 1.23 This ordinance is also intended to preserve the natural characteristics and functions of watercourses and floodplains in order to moderate flood and stormwater impacts, improve water quality, reduce soil erosion, protect aquatic and riparian habitat, provide recreational opportunities, provide aesthetic benefits and enhance community and economic development.

SECTION 2.0 GENERAL PROVISIONS

- 2.1 **Lands to Which Ordinance Applies:** This ordinance applies to all lands within the jurisdiction of the City of Greenbush shown on the Official Zoning Map and/or the attachments to the map as being located within the boundaries of the Floodway, Flood Fringe, or General Floodplain Districts. The boundaries of the zoning districts are determined by scaling distances on the Flood Insurance Rate Map, or as modified in accordance with 2.12 below.
 - 2.11 The Floodway, Flood Fringe and General Floodplain Districts are overlay districts that are superimposed on all existing zoning districts. The standards imposed in the overlay districts are in addition to any other requirements in this ordinance. In case of a conflict, the more restrictive standards will apply.
 - 2.12 Where a conflict exists between the floodplain limits illustrated on the official zoning map and actual field conditions, the flood elevations shall be the governing factor in locating the regulatory floodplain limits.
 - 2.13 Persons contesting the location of the district boundaries will be given a reasonable opportunity to present their case to the City Council and to submit technical evidence.
- 2.2 **Incorporation of Maps by Reference:** The following maps together with all attached material are hereby adopted by reference and declared to be a part of the Official Zoning Map and this ordinance. The attached material includes the Flood Insurance Study for Roseau County, Minnesota, and Incorporated Areas, dated April 19, 2017 and the Flood Insurance Rate Map panels enumerated below, dated April 19, 2017, all prepared by the Federal Emergency Management Agency. These materials are on file in the City Clerk's office.

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- 2.3 **Abrogation and Greater Restrictions:** It is not intended by this ordinance to repeal, abrogate, or impair any existing easements, covenants, or other private agreements. However, where this ordinance imposes greater restrictions, the provisions of this ordinance prevail. All other ordinances inconsistent with this ordinance are hereby repealed to the extent of the inconsistency only.
- 2.4 **Warning and Disclaimer of Liability:** This ordinance does not imply that areas outside the floodplain districts or land uses permitted within such districts will be free from flooding or flood damages. This ordinance does not

create liability on the part of Greenbush or its officers or employees for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

2.5 **Severability:** If any section, clause, provision, or portion of this ordinance is adjudged unconstitutional or invalid by a court of law, the remainder of this ordinance shall not be affected and shall remain in full force.

2.6 **Definitions:** Unless specifically defined below, words or phrases used in this ordinance must be interpreted according to common usage and so as to give this ordinance its most reasonable application.

2.611 Accessory Use or Structure – a use or structure on the same lot with, and of a nature customarily incidental and subordinate to, the principal use or structure.

2.612 Base Flood – the flood having a one percent chance of being equaled or exceeded in any given year.

2.613 Base Flood Elevation – The elevation of the “regional flood.” The term “base flood elevation” is used in the flood insurance survey.

2.614 Basement – any area of a structure, including crawl spaces, having its floor or base subgrade (below ground level) on all four sides, regardless of the depth of excavation below ground level.

2.615 Conditional Use – a specific type of structure or land use listed in the official control that may be allowed but only after an in-depth review procedure and with appropriate conditions or restrictions as provided in the official zoning controls or building codes and upon a finding that:

(a) Certain conditions as detailed in the zoning ordinance exist.

(b) The structure and/or land use conform to the comprehensive land use plan if one exists and are compatible with the existing neighborhood.

2.616 Critical Facilities – facilities necessary to a community’s public health and safety, those that store or produce highly volatile, toxic or water-reactive materials, and those that house occupants that may be insufficiently mobile to avoid loss of life or injury. Examples of critical facilities include hospitals, correctional facilities, schools, daycare facilities, nursing homes, fire and police stations, wastewater treatment facilities, public electric utilities, water plants, fuel storage facilities, and waste handling and storage facilities.

2.617 Development – any manmade change to improved or unimproved real estate, including buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

2.618 Equal Degree of Encroachment – a method of determining the location of floodway boundaries so that floodplain lands on both sides of a stream are capable of conveying a proportionate share of flood flows.

2.619 Farm Fence – A fence as defined by Minn. Statutes Section 344.02, Subd. 1(a)-(d). An open type fence of posts and wire is not considered to be a structure under this ordinance. Fences that have the potential to obstruct flood flows, such as chain link fences and rigid walls, are regulated as structures under this ordinance.

2.620 Flood – a temporary increase in the flow or stage of a stream or in the stage of a wetland or lake that results in the inundation of normally dry areas.

2.621 Flood Frequency – the frequency for which it is expected that a specific flood stage or discharge may be equaled or exceeded.

2.622 Flood Fringe – the portion of the Special Flood Hazard Area (one percent annual chance flood) located outside of the floodway. Flood fringe is synonymous with the term “floodway fringe” used in the Flood Insurance Study for Roseau County, Minnesota.

2.623 Flood Insurance Rate Map – An official map on which the Federal Insurance Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

- 2.624 Flood Prone Area – any land susceptible to being inundated by water from any source (see “Flood”).
- 2.625 Floodplain – the beds proper and the areas adjoining a wetland, lake or watercourse which have been or hereafter may be covered by the regional flood.
- 2.626 Floodproofing – a combination of structural provisions, changes, or adjustments to properties and structures subject to flooding, primarily for the reduction or elimination of flood damages.
- 2.627 Floodway – the bed of a wetland or lake and the channel of a watercourse and those portions of the adjoining floodplain which are reasonably required to carry or store the regional flood discharge.
- 2.628 Lowest Floor – the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, used 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 44 Code of Federal Regulations, Part 60.3.
- 2.629 Manufactured Home – 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 the term “recreational vehicle.”
- 2.630 New Construction - Structures, including additions and improvements, and placement of manufactured homes, for which the start of construction commenced on or after the effective date of this ordinance.
- 2.631 Obstruction – any dam, wall, wharf, embankment, levee, dike, pile, abutment, projection, excavation, channel modification, culvert, building, wire, fence, stockpile, refuse, fill, structure, or matter in, along, across, or projecting into any channel, watercourse, or regulatory floodplain which may impede, retard, or change the direction of the flow of water, either in itself or by catching or collecting debris carried by such water.
- 2.632 One Hundred Year Floodplain – lands inundated by the “Regional Flood” (see definition).
- 2.633 Principal Use or Structure – all uses or structures that are not accessory uses or structures.
- 2.634 Reach – a hydraulic engineering term to describe a longitudinal segment of a stream or river influenced by a natural or man-made obstruction. In an urban area, the segment of a stream or river between two consecutive bridge crossings would most typically constitute a reach.
- 2.635 Recreational Vehicle – a vehicle that is built on a single chassis, is 400 square feet or less when measured at the largest horizontal projection, is designed to be self-propelled or permanently towable by a light duty truck, and is designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use. For the purposes of this ordinance, the term recreational vehicle is synonymous with the term “travel trailer/travel vehicle.”
- 2.636 Regional Flood – a flood which is representative of large floods known to have occurred generally in Minnesota and reasonably characteristic of what can be expected to occur on an average frequency in the magnitude of the 1% chance or 100-year recurrence interval. Regional flood is synonymous with the term "base flood" used in a flood insurance study.
- 2.637 Regulatory Flood Protection Elevation (RFPE) - an elevation not less than one foot above the elevation of the regional flood plus any increases in flood elevation caused by encroachments on the floodplain that result from designation of a floodway.
- 2.638 Repetitive Loss: Flood related damages sustained by a structure on two separate occasions during a ten year period for which the cost of repairs at the time of each such flood event on the average equals or exceeds 25% of the market value of the structure before the damage occurred.
- 2.639 Special Flood Hazard Area – a term used for flood insurance purposes synonymous with “One Hundred Year Floodplain.”

- 2.640 Start of Construction – includes substantial improvement, and means the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement that occurred before the permit’s expiration date. The actual start is 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, 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.
- 2.641 Structure - anything constructed or erected on the ground or attached to the ground or on-site utilities, including, but not limited to, buildings, factories, sheds, detached garages, cabins, manufactured homes, recreational vehicles not meeting the exemption criteria specified in Section 10.22 of this ordinance and other similar items.
- 2.642 Substantial Damage - means damage of any origin sustained by a structure where the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.
- 2.643 Substantial Improvement - within any consecutive 365-day period, any reconstruction, rehabilitation (including normal maintenance and repair), repair after damage, 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 that 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.
 - (b) Any alteration of a “historic structure,” provided that the alteration will not preclude the structure’s continued designation as a “historic structure.” For the purpose of this ordinance, “historic structure” is as defined in 44 Code of Federal Regulations, Part 59.1.
- 2.7 **Annexations:** The Flood Insurance Rate Map panels adopted by reference into Section 2.2 above may include floodplain areas that lie outside of the corporate boundaries of the City of Greenbush at the time of adoption of this ordinance. If any of these floodplain land areas are annexed into the City of Greenbush after the date of adoption of this ordinance, the newly annexed floodplain lands will be subject to the provisions of this ordinance immediately upon the date of annexation.

SECTION 3.0 ESTABLISHMENT OF ZONING DISTRICTS

3.1 Districts:

- 3.11 Floodway District. The Floodway District includes those areas within Zones AE that have a floodway delineated, as shown on the Flood Insurance Rate Map adopted in Section 2.2.
- 3.12 Flood Fringe District. The Flood Fringe District includes areas within Zones AE on the Flood Insurance Rate Map adopted in Section 2.2, but located outside of the floodway.
- 3.13 General Floodplain District. The General Floodplain District includes those areas within Zone A as shown on the Flood Insurance Rate Map adopted in Section 2.2.

- 3.2 **Applicability:** Where Floodway and Flood Fringe districts are delineated on the floodplain maps, the standards in Sections 5 or 6 will apply, depending on the location of a property. Locations where Floodway and Flood Fringe districts are not delineated on the floodplain maps are considered to fall within the General Floodplain district. Within the General Floodplain district, the Floodway District standards in Section 5 apply unless the floodway boundary is determined, according to the process outlined in Section 7.2.

SECTION 4.0 REQUIREMENTS FOR ALL FLOODPLAIN DISTRICTS

- 4.1 Permit Required. A permit must be obtained from the Zoning Administrator to verify a development meets the standards outlined in this ordinance prior to conducting the following activities:
- 4.11 The erection, addition, modification, rehabilitation, or alteration of any building, structure, or portion thereof. Normal maintenance and repair also requires a permit if such work, separately or in conjunction with other planned work, constitutes a substantial improvement as defined in this ordinance.
 - 4.12 The use or change of use of a building, structure, or land.
 - 4.13 The construction of a dam, on-site septic system, or fence, although a permit is not required for a farm fence as defined in this ordinance.
 - 4.14 The change or extension of a nonconforming use.
 - 4.15 The repair of a structure that has been damaged by flood, fire, tornado, or any other source.
 - 4.16 The placement of fill, excavation of materials, or the storage of materials or equipment within the floodplain.
 - 4.17 Relocation or alteration of a watercourse (including new or replacement culverts and bridges), unless a public waters work permit has been applied for.
 - 4.18 Any other type of “development” as defined in this ordinance.
- 4.2 Building Sites. If a proposed building site is in a flood prone area, all new construction and substantial improvements (including the placement of manufactured homes) must be:
- 4.21 Designed (or modified) and adequately anchored to prevent floatation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
 - 4.22 Constructed with materials and utility equipment resistant to flood damage;
 - 4.23 Constructed by methods and practices that minimize flood damage; and
 - 4.24 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.
- 4.3 Flood Capacity. In no cases shall floodplain development adversely affect the efficiency or unduly restrict the capacity of the channels or floodways of any tributaries to the main stream, drainage ditches, or any other drainage facilities or systems.
- 4.4 The storage or processing of materials that are, in time of flooding, flammable, explosive, or potentially injurious to human, animal, or plant life is prohibited.
- 4.5 Critical Facilities, as defined in Section 2.616, are prohibited in all floodplain districts.

SECTION 5.0 FLOODWAY DISTRICT (FW)

- 5.1 **Permitted Uses:** The following uses, subject to the standards set forth in Section 5.2, are permitted uses if otherwise allowed in the underlying zoning district or any applicable overlay district:
- 5.11 General farming, pasture, grazing, farm fences, outdoor plant nurseries, horticulture, forestry, sod farming, and wild crop harvesting.

- 5.12 Industrial-commercial loading areas, parking areas, and airport landing strips.
 - 5.13 Open space uses, including but not limited to private and public golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting preserves, hunting and fishing areas, and single or multiple purpose recreational trails.
 - 5.14 Residential yards, lawns, gardens, parking areas, and play areas.
 - 5.15 Railroads, streets, bridges, utility transmission lines and pipelines, provided that the Department of Natural Resources' Area Hydrologist is notified at least ten days prior to issuance of any permit.
- 5.2 Standards for Floodway Permitted Uses:**
- 5.21 The use must have a low flood damage potential.
 - 5.22 The use must not obstruct flood flows or cause any increase in flood elevations and must not involve structures, obstructions, or storage of materials or equipment.
 - 5.23 Any facility that will be used by employees or the general public must be designed with a flood warning system that provides adequate time for evacuation if the area is inundated to a depth and velocity such that the depth (in feet) multiplied by the velocity (in feet per second) would exceed a product of four upon occurrence of the regional (1% chance) flood.
- 5.3 Conditional Uses:** The following uses may be allowed as conditional uses following the standards and procedures set forth in Section 11.4 of this ordinance and further subject to the standards set forth in Section 5.4, if otherwise allowed in the underlying zoning district or any applicable overlay district.
- 5.31 Structures accessory to the uses listed in 5.11 – 5.13 above and the uses listed in 5.32 - 5.33 below.
 - 5.32 Extraction, fill and storage of soil, sand, gravel, and other materials.
 - 5.33 Marinas, boat rentals, permanent docks, piers, wharves, and water control structures.
 - 5.34 Storage yards for equipment, machinery, or materials.
 - 5.35 Construction of fences that obstruct flood flows. Farm fences, as defined in section 2.619, are permitted uses.
 - 5.36 Travel-ready recreational vehicles meeting the exception standards in Section 10.22.
 - 5.37 Levees or dikes intended to protect agricultural crops for a frequency flood event equal to or less than the 10-year frequency flood event.
- 5.4 Standards for Floodway Conditional Uses:**
- 5.41 All Uses. A conditional use must not cause any increase in the regional flood elevations or cause an increase in flood damages in the reach or reaches affected.
 - 5.42 Fill; Storage of Materials and Equipment:
 - (a) Fill, dredge spoil, and other similar materials deposited or stored in the floodplain must be protected from erosion by vegetative cover, mulching, riprap or other acceptable method. Permanent sand and gravel operations and similar uses must be covered by a long-term site development plan.
 - (b) Temporary placement of fill, other materials, or equipment which would cause an increase to the stage of the 1% percent chance or regional flood may only be allowed if the City Council has approved a plan that assures removal of the materials from the floodway based upon the flood warning time available.
 - 5.43 Accessory Structures. Accessory structures, as identified in Section 5.31, may be permitted, provided that:
 - (a) Structures are not intended for human habitation;
 - (b) Structures will have a low flood damage potential;

- (c) Structures will be constructed and placed so as to offer a minimal obstruction to the flow of flood waters;
- (d) Service utilities, such as electrical and heating equipment, within these structures must be elevated to or above the regulatory flood protection elevation or properly floodproofed;
- (e) Structures must be elevated on fill or structurally dry floodproofed in accordance with the FP1 or FP2 floodproofing classifications in the State Building Code. All floodproofed structures must be adequately anchored to prevent flotation, collapse or lateral movement and designed to equalize hydrostatic flood forces on exterior walls.
- (f) As an alternative, an accessory structure may be internally/wet floodproofed to the FP3 or FP4 floodproofing classifications in the State Building Code, provided the accessory structure constitutes a minimal investment. Designs for meeting this requirement must either be certified by a registered professional engineer or meet or exceed the following criteria:
 - (1) To allow for the equalization of hydrostatic pressure, there must be a minimum of two “automatic” openings in the outside walls of the structure, with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding; and
 - (2) There must be openings on at least two sides of the structure and the bottom of all openings must be no higher than one foot above the lowest adjacent grade to the structure. Using human intervention to open a garage door prior to flooding will not satisfy this requirement for automatic openings.

5.44 Structural works for flood control that will change the course, current or cross section of protected wetlands or public waters are subject to the provisions of Minnesota Statutes, Section 103G.245.

5.45 A levee, dike or floodwall constructed in the floodway must not cause an increase to the 1% chance or regional flood. The technical analysis must assume equal conveyance or storage loss on both sides of a stream.

5.46 Floodway developments must not adversely affect the hydraulic capacity of the channel and adjoining floodplain of any tributary watercourse or drainage system.

SECTION 6.0 FLOOD FRINGE DISTRICT (FF)

6.1 **Permitted Uses:** Permitted uses are those uses of land or structures allowed in the underlying zoning district(s) that comply with the standards in Sections 6.2. If no pre-existing, underlying zoning districts exist, then any residential or nonresidential structure or use of a structure or land is a permitted use provided it does not constitute a public nuisance.

6.2 Standards for Flood Fringe Permitted Uses:

6.211 All structures, including accessory structures, must be elevated on fill so that the lowest floor, as defined, is at or above the regulatory flood protection elevation. The finished fill elevation for structures must be no lower than one foot below the regulatory flood protection elevation and the fill must extend at the same elevation at least 15 feet beyond the outside limits of the structure.

6.212 Accessory Structures. As an alternative to the fill requirements of section 6.211, structures accessory to the uses identified in Section 6.1 may be permitted to be internally/wet floodproofed to the FP3 or FP4 floodproofing classifications in the State Building Code, provided that:

- (a) The accessory structure constitutes a minimal investment, does not exceed 576 square feet in size, and is only used for parking and storage.
- (b) All portions of floodproofed accessory structures below the Regulatory Flood Protection Elevation must be: (i) adequately anchored to prevent flotation, collapse or lateral movement and designed to equalize hydrostatic flood forces on exterior walls, (ii) be constructed with materials resistant to flood damage,

and (iii) must have all service utilities be water-tight or elevated to above the regulatory flood protection elevation

(c) Designs for meeting this requirement must either be certified by a registered professional engineer or meet or exceed the following criteria:

(1) To allow for the equalization of hydrostatic pressure, there must be a minimum of two "automatic" openings in the outside walls of the structure, with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding; and

(2) There must be openings on at least two sides of the structure and the bottom of all openings must be no higher than one foot above the lowest adjacent grade to the structure. Using human intervention to open a garage door prior to flooding will not satisfy this requirement for automatic openings.

6.213 The cumulative placement of fill or similar material on a parcel must not exceed 1,000 cubic yards, unless the fill is specifically intended to elevate a structure in accordance with Section 6.211 of this ordinance, or if allowed as a conditional use under Section 6.33 below.

6.214 The storage of any materials or equipment must be elevated on fill to the regulatory flood protection elevation.

6.215 All service utilities, including ductwork, must be elevated or water-tight to prevent infiltration of floodwaters.

6.216 All fill must be properly compacted and the slopes must be properly protected by the use of riprap, vegetative cover or other acceptable method.

6.217 All new principal structures must have vehicular access at or above an elevation not more than two feet below the regulatory flood protection elevation, or must have a flood warning /emergency evacuation plan acceptable to the City Council.

6.218 Accessory uses such as yards, railroad tracks, and parking lots may be at an elevation lower than the regulatory flood protection elevation. However, any facilities used by employees or the general public must be designed with a flood warning system that provides adequate time for evacuation if the area is inundated to a depth and velocity such that the depth (in feet) multiplied by the velocity (in feet per second) would exceed a product of four upon occurrence of the regional (1% chance) flood.

6.219 Interference with normal manufacturing/industrial plant operations must be minimized, especially along streams having protracted flood durations. In considering permit applications, due consideration must be given to the needs of industries with operations that require a floodplain location.

6.220 Manufactured homes and recreational vehicles must meet the standards of Section 10 of this ordinance.

6.3 **Conditional Uses:** The following uses and activities may be allowed as conditional uses, if allowed in the underlying zoning district(s) or any applicable overlay district, following the procedures in Section 11.4 of this ordinance.

6.31 Any structure that is not elevated on fill or floodproofed in accordance with Sections 6.211 and 6.212 of this ordinance.

6.32 Storage of any material or equipment below the regulatory flood protection elevation.

6.33 The cumulative placement of more than 1,000 cubic yards of fill when the fill is not being used to elevate a structure in accordance with Section 6.211 of this ordinance.

6.34 The use of methods to elevate structures above the regulatory flood protection elevation, including stilts, pilings, parallel walls, or above-grade, enclosed areas such as crawl spaces or tuck under garages, shall meet the standards in Section 6.46.

6.4 Standards for Flood Fringe Conditional Uses:

- 6.41 The standards listed in Sections 6.214 through 6.219 apply to all conditional uses.
- 6.42 Residential basements, as defined by Section 2.614 of this ordinance, are not allowed below the regulatory flood protection elevation.
- 6.43 All areas of nonresidential structures, including basements, to be placed below the regulatory flood protection elevation must be structurally dry floodproofed, meeting the FP1 or FP2 floodproofing classification in the State Building Code, which requires making the structure watertight with the walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.
- 6.44 The placement of more than 1,000 cubic yards of fill or other similar material on a parcel (other than for the purpose of elevating a structure to the regulatory flood protection elevation) must comply with an approved erosion/sedimentation control plan.
- (a) The plan must clearly specify methods to be used to stabilize the fill on site for a flood event at a minimum of the regional (1% chance) flood event.
 - (b) The plan must be prepared and certified by a registered professional engineer or other qualified individual acceptable to the City Council.
 - (c) The plan may incorporate alternative procedures for removal of the material from the floodplain if adequate flood warning time exists.
- 6.45 Storage of materials and equipment below the regulatory flood protection elevation must comply with an approved emergency plan providing for removal of such materials within the time available after a flood warning.
- 6.46 Alternative elevation methods other than the use of fill may be utilized to elevate a structure's lowest floor above the regulatory flood protection elevation. The base or floor of an enclosed area shall be considered above-grade and not a structure's basement or lowest floor if: 1) the enclosed area is above-grade on at least one side of the structure; 2) it is designed to internally flood and is constructed with flood resistant materials; and 3) it is used solely for parking of vehicles, building access or storage. The above-noted alternative elevation methods are subject to the following additional standards:
- (a) Design and Certification - The structure's design and as-built condition must be certified by a registered professional engineer as being in compliance with the general design standards of the State Building Code and, specifically, that all electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities must be at or above the regulatory flood protection elevation or be designed to prevent flood water from entering or accumulating within these components during times of flooding. Structure shall be subject to a nonconversion agreement with upon the issuance of any permit.
 - (b) Above-grade, fully enclosed areas such as crawl spaces or tuck under garages must be designed to internally flood and the design plans must stipulate:
 - (1) The minimum area of openings in the walls where internal flooding is to be used as a floodproofing technique. There shall be a minimum of two openings on at least two sides of the structure and the bottom of all openings shall be no higher than one foot above grade. The automatic openings shall have a minimum net area of not less than one square inch for every square foot of enclosed area subject to flooding unless a registered professional engineer or architect certifies that a smaller net area would suffice. The automatic openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of flood waters without any form of human intervention; and

- (2) That the enclosed area will be designed of flood resistant materials in accordance with the FP3 or FP4 classifications in the State Building Code and shall be used solely for building access, parking of vehicles or storage.

SECTION 7.0 GENERAL FLOODPLAIN DISTRICT (GF)

7.1 Permitted Uses:

- 7.11 The uses listed in Section 5.1 of this ordinance, Floodway District Permitted Uses, are permitted uses.
- 7.12 All other uses are subject to the floodway/flood fringe evaluation criteria specified in Section 7.2 below. Section 5.0 applies if the proposed use is determined to be in the Floodway District. Section 6.0 applies if the proposed use is determined to be in the Flood Fringe District.

7.2 Procedures for Determining Floodway and Flood Fringe Boundaries and Regional Flood Elevations:

- 7.21 Upon receipt of an application for a permit or other approval within the General Floodplain District, the Zoning Administrator must obtain, review and reasonably utilize any regional flood elevation and floodway data available from a federal, state, or other source.
- 7.22 If regional flood elevation and floodway data are not readily available, or the application involves a project exceeding the lesser of five acres or 50 lots, the applicant must furnish additional information, as needed, to determine the regulatory flood protection elevation and whether the proposed use would fall within the Floodway or Flood Fringe District. Information must be consistent with accepted hydrological and hydraulic engineering standards and the standards in 7.23 below.
- 7.23 The determination of floodway and flood fringe must include the following components, as applicable:
- (a) Estimate the peak discharge of the regional (1% chance) flood.
 - (b) Calculate the water surface profile of the regional flood based upon a hydraulic analysis of the stream channel and overbank areas.
 - (c) Compute the floodway necessary to convey or store the regional flood without increasing flood stages more than one-half (0.5) foot. A lesser stage increase than 0.5 foot is required if, as a result of the stage increase, increased flood damages would result. An equal degree of encroachment on both sides of the stream within the reach must be assumed in computing floodway boundaries.
- 7.24 The Zoning Administrator will review the submitted information and assess the technical evaluation and the recommended Floodway and/or Flood Fringe District boundary. The assessment must include the cumulative effects of previous floodway encroachments. The Zoning Administrator may seek technical assistance from a designated engineer or other expert person or agency, including the Department of Natural Resources. Based on this assessment, the Zoning Administrator may approve or deny the application.
- 7.25 Once the Floodway and Flood Fringe District boundaries have been determined, the Zoning Administrator must process the permit application consistent with the applicable provisions of Section 5.0 and 6.0 of this ordinance.

SECTION 8.0 SUBDIVISION STANDARDS

- 8.1 **Subdivisions:** No land may be subdivided which is unsuitable for reasons of flooding or inadequate drainage, water supply or sewage treatment facilities. Manufactured home parks and recreational vehicle parks or campgrounds are considered subdivisions under this ordinance.
- 8.11 All lots within the floodplain districts must be able to contain a building site outside of the Floodway District at or above the regulatory flood protection elevation.
- 8.12 All subdivisions must have road access both to the subdivision and to the individual building sites no lower than two feet below the regulatory flood protection elevation, unless a flood warning emergency plan for

the safe evacuation of all vehicles and people during the regional (1% chance) flood has been approved by the City Council. The plan must be prepared by a registered engineer or other qualified individual, and must demonstrate that adequate time and personnel exist to carry out the evacuation.

- 8.13 For all subdivisions in the floodplain, the Floodway and Flood Fringe District boundaries, the regulatory flood protection elevation and the required elevation of all access roads must be clearly labeled on all required subdivision drawings and platting documents.
- 8.14 In the General Floodplain District, applicants must provide the information required in Section 7.2 of this ordinance to determine the regional flood elevation, the Floodway and Flood Fringe District boundaries and the regulatory flood protection elevation for the subdivision site.
- 8.15 Subdivision proposals must be reviewed to assure that:
 - (a) All such proposals are consistent with the need to minimize flood damage within the flood prone area,
 - (b) All public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and
 - (c) Adequate drainage is provided to reduce exposure of flood hazard.

SECTION 9.0 PUBLIC UTILITIES, RAILROADS, ROADS, AND BRIDGES

- 9.1 **Public Utilities:** All public utilities and facilities such as gas, electrical, sewer, and water supply systems to be located in the floodplain must be floodproofed in accordance with the State Building Code or elevated to the regulatory flood protection elevation.
- 9.2 **Public Transportation Facilities:** Railroad tracks, roads, and bridges to be located within the floodplain must comply with Sections 4.0 and 5.0 of this ordinance. These transportation facilities must be elevated to the regulatory flood protection elevation where failure or interruption of these facilities would result in danger to the public health or safety or where such facilities are essential to the orderly functioning of the area. Minor or auxiliary roads or railroads may be constructed at a lower elevation where failure or interruption of transportation services would not endanger the public health or safety.
- 9.3 **On-site Water Supply and Sewage Treatment Systems:** Where public utilities are not provided: 1) On-site water supply systems must be designed to minimize or eliminate infiltration of flood waters into the systems and are subject to the provisions in Minnesota Rules Chapter 4725.4350, as amended; and 2) New or replacement on-site sewage treatment systems must be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters, they must not be subject to impairment or contamination during times of flooding, and are subject to the provisions in Minnesota Rules Chapter 7080.2270, as amended.

SECTION 10.0 MANUFACTURED HOMES AND RECREATIONAL VEHICLES.

- 10.1 **Manufactured Homes:** New manufactured home parks and expansions to existing manufactured home parks are prohibited in any floodplain district. For existing manufactured home parks or lots of record, the following requirements apply:
 - 10.11 Placement or replacement of manufactured home units is prohibited in the Floodway District.
 - 10.12 Placement or replacement of manufactured home units in the Flood Fringe District is subject to the requirements of Section 6 of this ordinance and the following standards.
 - (a) New and replacement manufactured homes must be elevated in compliance with Section 5 of this ordinance and must be securely anchored to an adequately anchored foundation system that resists flotation, collapse and 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 or local anchoring requirements for resisting wind forces.
 - (b) New or replacement manufactured homes in existing manufactured home parks must meet the vehicular access requirements for subdivisions in Section 8.12.

10.2 Recreational Vehicles: New recreational vehicle parks or campgrounds and expansions to existing recreational vehicle parks or campgrounds are prohibited in any floodplain district. Placement of recreational vehicles in existing recreational vehicle parks or campgrounds in the floodplain must meet the requirements below.

10.21 Recreational vehicles are exempt from the provisions of this ordinance if they are placed in any of the following areas and meet the criteria listed in Section 10.22:

- (a) Individual lots or parcels of record.
- (b) Existing commercial recreational vehicle parks or campgrounds.
- (c) Existing condominium-type associations.

10.22 Criteria for Exempt Recreational Vehicles:

- (a) The vehicle must have a current license required for highway use.
- (b) The vehicle must be highway ready, meaning on wheels or the internal jacking system, attached to the site only by quick disconnect type utilities commonly used in campgrounds and recreational vehicle parks.
- (c) No permanent structural type additions may be attached to the vehicle.
- (d) Accessory structures may be permitted in the Flood Fringe District, provided that they constitute a minimal investment, do not hinder the removal of the vehicle should flooding occur, and meet the standards outlined in Sections 4.2 and 6.212.

SECTION 11.0 ADMINISTRATION

11.1 Duties: A Zoning Administrator or other official designated by the City Council must administer and enforce this ordinance.

11.2 Permit Application Requirements:

11.21 Application for Permit. Permit applications must be submitted to the Zoning Administrator on forms provided by the Zoning Administrator. The permit application must include the following as applicable:

- (a) A site plan showing all pertinent dimensions, existing or proposed buildings, structures, and significant natural features having an influence on the permit.
- (b) Location of fill or storage of materials in relation to the stream channel.
- (c) Copies of any required municipal, county, state or federal permits or approvals.
- (d) Other relevant information requested by the Zoning Administrator as necessary to properly evaluate the permit application.

11.22 Certification. The applicant is required to submit certification by a registered professional engineer, registered architect, or registered land surveyor that the finished fill and building elevations were accomplished in compliance with the provisions of this ordinance. Floodproofing measures must be certified by a registered professional engineer or registered architect. Accessory structures designed in accordance with Section 6.212 are exempt from certification, provided sufficient documentation is provided.

11.23 Certificate of Zoning Compliance for a New, Altered, or Nonconforming Use. No building, land or structure may be occupied or used in any manner until a certificate of zoning compliance has been issued by the Zoning Administrator stating that the use of the building or land conforms to the requirements of this ordinance.

11.24 Record of First Floor Elevation. The Zoning Administrator must maintain a record of the elevation of the lowest floor (including basement) of all new structures and alterations or additions to existing structures in

the floodplain. The Zoning Administrator must also maintain a record of the elevation to which structures and alterations or additions to structures are floodproofed.

- 11.25 Notifications for Watercourse Alterations. Before authorizing any alteration or relocation of a river or stream, the Zoning Administrator must notify adjacent communities. If the applicant has applied for a permit to work in public waters pursuant to Minnesota Statutes, Section 103G.245, this will suffice as adequate notice. A copy of the notification must also be submitted to the Chicago Regional Office of the Federal Emergency Management Agency (FEMA).
- 11.26 Notification to FEMA When Physical Changes Increase or Decrease Base Flood Elevations. As soon as is practicable, but not later than six months after the date such supporting information becomes available, the Zoning Administrator must notify the Chicago Regional Office of FEMA of the changes by submitting a copy of the relevant technical or scientific data.

11.3 Variances:

- 11.31 Variance Applications. An application for a variance to the provisions of this ordinance will be processed and reviewed in accordance with applicable state statutes and Section(s) **Article XVII. Administration** of the zoning ordinance/code.
- 11.32 Adherence to State Floodplain Management Standards. A variance must not allow a use that is not allowed in that district, permit a lower degree of flood protection than the regulatory flood protection elevation for the particular area, or permit standards lower than those required by state law.
- 11.33 Additional Variance Criteria. The following additional variance criteria of the Federal Emergency Management Agency must be satisfied:
- (a) Variances must not be issued by a community within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result.
 - (b) Variances may only be issued by a community upon (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
 - (c) Variances may only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- 11.34 Flood Insurance Notice. The Zoning Administrator must notify the applicant for a variance that: 1) The issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage; and 2) Such construction below the base or regional flood level increases risks to life and property. Such notification must be maintained with a record of all variance actions.
- 11.35 General Considerations. The community may consider the following factors in granting variances and imposing conditions on variances and conditional uses in floodplains:
- (a) The potential danger to life and property due to increased flood heights or velocities caused by encroachments;
 - (b) The danger that materials may be swept onto other lands or downstream to the injury of others;
 - (c) The proposed water supply and sanitation systems, if any, and the ability of these systems to minimize the potential for disease, contamination and unsanitary conditions;
 - (d) The susceptibility of any proposed use and its contents to flood damage and the effect of such damage on the individual owner;
 - (e) The importance of the services to be provided by the proposed use to the community;

- (f) The requirements of the facility for a waterfront location;
- (g) The availability of viable alternative locations for the proposed use that are not subject to flooding;
- (h) The compatibility of the proposed use with existing development and development anticipated in the foreseeable future;
- (i) The relationship of the proposed use to the Comprehensive Land Use Plan and flood plain management program for the area;
- (j) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- (k) The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters expected at the site.

11.36 Submittal of Hearing Notices to the Department of Natural Resources (DNR). The Zoning Administrator must submit hearing notices for proposed variances to the DNR sufficiently in advance to provide at least ten days' notice of the hearing. The notice may be sent by electronic mail or U.S. Mail to the respective DNR area hydrologist.

11.37 Submittal of Final Decisions to the DNR. A copy of all decisions granting variances must be forwarded to the DNR within ten days of such action. The notice may be sent by electronic mail or U.S. Mail to the respective DNR area hydrologist.

11.38 Record-Keeping. The Zoning Administrator must maintain a record of all variance actions, including justification for their issuance, and must report such variances in an annual or biennial report to the Administrator of the National Flood Insurance Program, when requested by the Federal Emergency Management Agency.

11.4 Conditional Uses:

11.41 Administrative Review. An application for a conditional use permit under the provisions of this ordinance will be processed and reviewed in accordance with Section(s) **Article XVII. Administration** of the zoning ordinance/code.

11.42 Factors Used in Decision-Making. In passing upon conditional use applications, the City Council must consider all relevant factors specified in other sections of this ordinance, and those factors identified in Section 10.35 of this ordinance.

11.43 Conditions Attached to Conditional Use Permits. The City Council may attach such conditions to the granting of conditional use permits as it deems necessary to fulfill the purposes of this ordinance. Such conditions may include, but are not limited to, the following:

- (a) Modification of waste treatment and water supply facilities.
- (b) Limitations on period of use, occupancy, and operation.
- (c) Imposition of operational controls, sureties, and deed restrictions.
- (d) Requirements for construction of channel modifications, compensatory storage, dikes, levees, and other protective measures.
- (e) Floodproofing measures, in accordance with the State Building Code and this ordinance. The applicant must submit a plan or document certified by a registered professional engineer or architect that the floodproofing measures are consistent with the regulatory flood protection elevation and associated flood factors for the particular area.

11.44 Submittal of Hearing Notices to the Department of Natural Resources (DNR). The Zoning Administrator must submit hearing notices for proposed conditional uses to the DNR sufficiently in advance to provide at least ten days' notice of the hearing. The notice may be sent by electronic mail or U.S. Mail to the respective DNR area hydrologist.

- 11.45 Submittal of Final Decisions to the DNR. A copy of all decisions granting conditional uses must be forwarded to the DNR within ten days of such action. The notice may be sent by electronic mail or U.S. Mail to the respective DNR area hydrologist.

SECTION 12.0 NONCONFORMITIES

- 12.1 Continuance of Nonconformities:** A use, structure, or occupancy of land which was lawful before the passage or amendment of this ordinance but which is not in conformity with the provisions of this ordinance may be continued subject to the following conditions. Historic structures, as defined in Section 2.643(b) of this ordinance, are subject to the provisions of Sections 12.11 – 12.16 of this ordinance.
- 12.11 A nonconforming use, structure, or occupancy must not be expanded, changed, enlarged, or altered in a way that increases its flood damage potential or degree of obstruction to flood flows except as provided in 12.12 below. Expansion or enlargement of uses, structures or occupancies within the Floodway District is prohibited.
- 12.12 Any addition or structural alteration to a nonconforming structure or nonconforming use that would result in increasing its flood damage potential must be protected to the regulatory flood protection elevation in accordance with any of the elevation on fill or floodproofing techniques (i.e., FP1 thru FP4 floodproofing classifications) allowable in the State Building Code, except as further restricted in 12.14 below.
- 12.13 If any nonconforming use, or any use of a nonconforming structure, is discontinued for more than one year, any future use of the premises must conform to this ordinance.
- 12.14 If any structure experiences a substantial improvement as defined in this ordinance, then the entire structure must meet the standards of Section 5.0 or 6.0 of this ordinance for new structures, depending upon whether the structure is in the Floodway or Flood Fringe District, respectively. If the current proposal, including maintenance and repair during the previous 365 days, plus the costs of any previous alterations and additions since the first Flood Insurance Rate Map exceeds 50 percent of the market value of any nonconforming structure, the entire structure must meet the standards of Section 5.0 or 6.0 of this ordinance.
- 12.15 If any nonconformity is substantially damaged, as defined in this ordinance, it may not be reconstructed except in conformity with the provisions of this ordinance. The applicable provisions for establishing new uses or new structures in Sections 5.0 or 6.0 will apply depending upon whether the use or structure is in the Floodway or Flood Fringe, respectively.
- 12.16 If any nonconforming use or structure experiences a repetitive loss, as defined in Section 2.638 of this ordinance, it must not be reconstructed except in conformity with the provisions of this ordinance.

SECTION 13.0 VIOLATIONS AND PENALTIES

- 13.1 **Violation Constitutes a Misdemeanor:** Violation of the provisions of this ordinance or failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with grants of variances or conditional uses) constitute a misdemeanor and will be punishable as defined by law.
- 13.2 **Other Lawful Action:** Nothing in this ordinance restricts the City of Greenbush from taking such other lawful action as is necessary to prevent or remedy any violation. If the responsible party does not appropriately respond to the Zoning Administrator within the specified period of time, each additional day that lapses will constitute an additional violation of this ordinance and will be prosecuted accordingly.
- 13.3 **Enforcement:** Violations of the provisions of this ordinance will be investigated and resolved in accordance with the provisions of Section(s) **Article XVII. Administration** of the zoning ordinance/code. In responding to a suspected ordinance violation, the Zoning Administrator and City Council may utilize the full array of enforcement actions available to it including but not limited to prosecution and fines, injunctions, after-the-fact permits, orders for corrective measures or a request to the National Flood Insurance Program for denial of flood insurance availability to the guilty party. The City of Greenbush must act in good faith to enforce these official controls and to

correct ordinance violations to the extent possible so as not to jeopardize its eligibility in the National Flood Insurance Program.

SECTION 14.0 AMENDMENTS

- 14.1 **Floodplain Designation – Restrictions on Removal:** The floodplain designation on the Official Zoning Map must not be removed from floodplain areas unless it can be shown that the designation is in error or that the area has been filled to or above the elevation of the regulatory flood protection elevation and is contiguous to lands outside the floodplain. Special exceptions to this rule may be permitted by the Commissioner of the Department of Natural Resources (DNR) if the Commissioner determines that, through other measures, lands are adequately protected for the intended use.
- 14.2 **Amendments Require DNR Approval:** All amendments to this ordinance must be submitted to and approved by the Commissioner of the Department of Natural Resources (DNR) prior to adoption. The Commissioner must approve the amendment prior to community approval.
- 14.3 **Map Revisions Require Ordinance Amendments.** The floodplain district regulations must be amended to incorporate any revisions by the Federal Emergency Management Agency to the floodplain maps adopted in Section 2.2 of this ordinance.

SECTION 15.0

- 15.1 **Effective Date:** This ordinance shall be in full force and effect from and after its passage and approval and publication, as required by law and/or charter.
- 15.2 **Repeal:** This ordinance repeals Ordinance No 61 Flood Plain.

Adopted by the Greenbush City Council

This 21st of February, 2017

Attest: _____, Mayor
Brenda Sather

Attest: _____, City Clerk
Anita Locken

Stamp with Community Seal: