

Chapter 30.40 FREQUENTLY FLOODED AREAS

30.40.010 Designation of frequently flooded areas.

- (a) Frequently Flooded Areas. Frequently flooded areas shall include:
- (1) Areas Identified on the Flood Insurance Map. Those areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled The Flood Insurance Study for the City of Ruston dated July 3, 1986, with an accompanying flood insurance map and any revisions thereto. The flood insurance study and accompanying map is hereby adopted by reference, declared part of this chapter, and are available for public review at the City of Ruston. In case of a conflict, the current FEMA flood insurance map shall be determinative.
 - (2) Areas Identified by the Planning Director. Those areas of special flood hazard identified by the Planning Director based on review of base flood elevation and floodway data available from federal, state, county or other valid sources when base flood elevation data has not been provided from the Federal Insurance Administration, (A and V zones of the flood insurance map).
- (b) Use of Additional Information. The Planning Director may use additional flood information that is more restrictive or detailed than that provided in the flood insurance study conducted by the Federal Emergency Management Agency (FEMA) to designate frequently flooded areas, including data on channel migration, historical data, high water marks, photographs of past flooding, location of restrictive floodways, maps showing future build-out conditions, maps that show riparian habitat areas, or similar information.
- (c) Flood Elevation Data. When base flood elevation data is not available (A and V zones), the Planning Director shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, in order to administer this chapter.
- (d) Designation Made by Director. The flood insurance maps are to be used as a guide for the City, project applicants and/or property owners, and the public and should be considered a minimum designation of frequently flooded areas. As flood insurance maps may be continuously updated as areas are reexamined or new areas are identified, newer and more restrictive information for flood hazard area identification shall be the basis for regulation.
- (e) Maintenance of Records. Where base flood elevation data is provided through the flood insurance study or required through Section 30.40.010(c) of this chapter, the Planning Director shall obtain and record the as-built elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement. The Planning Director shall also maintain for public inspection all records of floodplain hazards, certificates of floodproofing, and flood elevation data.

(Ord. 1456 § 5, Dec. 20th, 2016).

30.40.020 Critical area report—Additional requirements.

In addition to the general critical area report requirements of Section 30.10.210, critical area reports for frequently flooded areas must meet the requirements of this section. Critical area reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area.

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- (a) Preparation by a Qualified Professional. A frequently flooded areas report shall be prepared by a qualified professional who is a hydrologist or engineer, licensed in the State of Washington with experience in preparing flood hazard assessments.
 - (b) Areas to be Addressed. The following areas shall be addressed in a critical area report for frequently flooded areas:
 - (1) The site area of the proposed activity;
 - (2) All areas of a special flood hazard area, as indicated on the flood insurance map(s) within 200 feet of the project area; and
 - (3) All other flood areas indicated on the flood insurance map(s) within 200 feet of the project area.
 - (c) Flood Hazard Assessment. A critical area report for a proposed activity within a frequently flooded area shall contain a flood hazard assessment including the following site- and proposal-related information at a minimum:
 - (1) Site and Construction Plans. A copy of the site and construction plans for the development proposal showing:
 - (A) Floodplain (100-year flood elevation), 10- and 50-year flood elevations, floodway, other critical areas, buffers, and shoreline areas;
 - (B) Proposed development, including the location of existing and proposed structures, fill, storage of materials, and drainage facilities, with dimensions indicating distances to the floodplain;
 - (C) Clearing limits; and
 - (D) Elevation of the lowest floor (including basement) of all structures, and the level to which any nonresidential structure has been floodproofed.
 - (2) Watercourse Alteration. Alteration of natural watercourses shall be avoided, if feasible. If unavoidable, a critical area report shall include:
 - (A) Extent of Watercourse Alteration. A description of and plan showing the extent to which a watercourse will be altered or relocated as a result of proposal;
 - (B) Maintenance Program Required for Watercourse Alterations. A maintenance program that provides maintenance practices for the altered or relocated portion of the watercourse to ensure that the flood carrying capacity is not diminished; and
 - (C) Compliance Documentation. Information describing and documenting how the proposed watercourse alteration complies with the requirements of fish and wildlife habitat conservation areas, Ruston Shoreline Master Program and other applicable state or federal permit requirements.
 - (d) Information Regarding Other Critical Areas. Potential impacts to wetlands, fish and wildlife habitat, and other critical areas shall be addressed in accordance with the applicable sections of this title.

(Ord. 1456 § 5, Dec. 20th, 2016).

30.40.030 Warning and Disclaimer of Liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This title does not imply that land outside frequently

flooded areas or uses permitted within such areas will be free from flooding or flood damages. This title shall not create liability on the part of the City of Ruston, any officer or employee thereof, or the Federal Insurance Administration for any flood damages that result from reliance on this title or any administrative decision lawfully made hereunder.

(Ord. 1456 § 5, Dec. 20th, 2016).

30.40.040 Performance standards—General requirements.

The following standards shall be adhered to in all frequently flooded areas, except as otherwise provide for in this chapter.

- (a) **Development Permit.** A development permit shall be obtained before land is altered or a new use is commenced within a frequently flooded area. For application of this chapter, development shall include any manmade alteration to land, including, but not limited to, buildings, structures, mining, dredging, filling, grading, paving, excavation, drilling operations, or storage of equipment or materials within the area of special flood hazard.
- (b) **All Other Necessary Permits.** The Planning Director shall verify that all necessary permits have been obtained from those governmental agencies from which prior approval is required by federal, state, or local law including Section 404 of the Federal Water Pollution Control Act Amendment of 1972 and the Endangered Species Act of 1973.
- (c) **Before Regulatory Floodway.** In areas where the base flood elevation is provided, but where a regulatory floodway has not been designated, new construction, substantial improvements, or other development, including fill, shall not be permitted within zones A1-30 and AE, 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 one foot at any point within the community.
- (d) **Areas Without Base Flood Elevation Data.** Where base flood elevation data is not available (A and V zones) and there is insufficient data available from federal, state, or other sources, the Planning Director shall determine the base flood elevation using approved engineering methods and historical data, such as high water marks, photographs of past flooding, and other available information.

If there is insufficient data available for the Planning Director to make a determination of the base flood elevation and standards requiring a base flood elevation cannot be implemented, the Planning Director shall require measures that ensure the proposed structures will be reasonably safe from flooding. At a minimum, the base flood elevation should be set at least two feet above the highest adjacent grade to avoid higher flood insurance rates.

- (e) **Construction Materials and Methods.**
 - (1) **Structures Shall be Located Outside the Floodplain.** All structures, utilities, and other improvements shall be located on the buildable portion of the site out of the floodplain unless there is no buildable site area out of the floodplain. For sites with no buildable area out of the floodplain, structures, utilities, and other improvements shall be placed on the highest land on the site, oriented parallel to flow rather than perpendicular, and sited as far from the watercourse and other critical areas as possible. If the Planning Director detects any evidence of active hypothetical exchange on a site, the development shall be located to minimize disruption of such exchange.

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- (2) Methods That Minimize Flood Damage. All new construction and substantial improvements shall be constructed using flood-resistant materials and using methods and practices that minimize flood damage.
 - (3) Utility Protection. Electrical, heating, ventilation, plumbing, air-conditioning equipment, and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
 - (f) Elevation Certificate Following Construction. Following construction of a structure within the floodplain where the base flood elevation is provided, the applicant shall obtain an elevation certificate that records the elevation of the lowest floor. The elevation certificate shall be completed by a surveyor or engineer licensed in the State of Washington and shall be submitted to the City for recording.
 - (g) Anchoring.
 - (1) Anchoring Requirement. All new construction and substantial improvements within the floodplain shall be anchored to prevent flotation, collapse, or lateral movement of the structure.
 - (2) Manufactured Homes. All manufactured homes placed within the floodplain must be anchored to prevent flotation, collapse, or lateral movement and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors.
 - (H) Fill and Grading. Fill and grading within the floodplain shall only occur on a determination from a qualified professional that the fill or grading will not block side channels, inhibit channel migration, increase flood hazards to others, or be placed within a channel migration zone, whether or not the City has delineated such zones as of the time of the application.

(Ord. 1456 § 5, Dec. 20th, 2016).

30.40.050 Performance standards—Specific uses.

Specific uses shall adhere to the following relevant standards, in addition to the general standards of Performance Standards—General Requirements, Section 30.40.040. Subsections (a) through (d) apply where base flood elevation data is provided through the flood insurance study or required through Section 30.40.010(c) of this chapter; subsections (e) through (g) apply to all frequently flooded areas.

- (a) Residential Construction.
 - (1) Must be Above Base Flood Elevation. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above the base flood elevation.
 - (2) Areas Below the Lowest Floor. Fully enclosed areas below the lowest floor that are subject to flooding shall only be allowed when 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:
 - (A) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;
 - (B) The bottom of all openings shall be no higher than one foot above grade; and
 - (C) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

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- (b) **Manufactured Homes Must be Elevated.** All manufactured homes to be placed or substantially improved shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot or more above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
 - (c) **Recreational Vehicles.** Recreational vehicles are required to either:
 - (1) Be on the site for fewer than 180 consecutive days;
 - (2) Be fully licensed and ready for highway use on its wheels or jacking system, be attached to the site only by quick-disconnect-type utilities and security devices and have no permanently attached additions; or
 - (3) Obtain a development permit and meet the requirements, including elevation and anchoring, for manufactured homes.
 - (d) **Nonresidential Construction.**
 - (1) **Above Base Flood Elevation.** New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall either have the lowest floor, including basement, elevated one foot or more above the base flood elevation, or, together with attendant utility and sanitary facilities, shall:
 - (A) Be floodproofed so that below one foot or more above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
 - (B) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
 - (C) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications, and plans. Such certification shall be provided to the Planning Director in accordance with Section 30.40.010(e). Following construction of the structure, certifications shall be submitted to the City that record the actual (as-built) elevation to which the structure was floodproofed.
 - (2) **Areas Below the Lowest Floor.** Fully enclosed areas below the lowest floor that are not floodproofed 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:
 - (A) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;
 - (B) The bottom of all openings shall be no higher than one foot above grade; and
 - (C) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
 - (e) **Utilities.**
 - (1) **Infiltration of Floodwaters.** All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems.
 - (2) **Sanitary Sewage Systems.** New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.

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- (3) On-Site Waste Disposal Systems. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding. New on-site sewage disposal systems are prohibited pursuant to uses and activities prohibited from frequently flooded areas, Section 30.40.080(c).
 - (f) Subdivision Proposals.
 - (1) Adequate Space Outside Flood Areas. All lots created through subdivision or short subdivision shall have adequate building space outside the 100-year floodplain, the floodway, and the channel migration zone.
 - (2) All subdivisions and short subdivisions shall:
 - (A) Minimize Flood Damage. Subdivisions and short subdivisions shall be designed to minimize or eliminate flood damage and impacts to floodplain functions and values. Public utilities and facilities that are installed as part of such subdivisions, such as sewer, gas, electrical, and water systems, shall be located and constructed to also minimize flood damage and impacts to floodplain functions and values. Subdivisions should be designed using natural features of the landscape and should not incorporate flood protection changes.
 - (B) Have Adequate Drainage. Subdivisions and short subdivisions shall have adequate natural surface water drainage in accordance with City storm drainage requirements to reduce exposure to flood hazards; and
 - (C) Show Flood Areas on Plat Maps. Subdivisions and short subdivisions shall show the 100-year floodplain, floodway, and channel migration zone on the preliminary and final plat and short plat maps and designate such areas as "no build," when applicable.
 - (3) Detailed Base Flood Elevation Data. Where detailed base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or five acres, and whichever is less.
 - (g) Alteration of Watercourses. Alteration of natural watercourses shall be avoided, if feasible. If unavoidable, the following provisions shall apply to the alteration:
 - (1) Habitat Regulations. Watercourse alterations shall only be allowed in accordance with the fish and wildlife habitat conservation areas, Chapter 30.60.
 - (2) Blockage. Watercourse alteration projects shall not result in blockage of side channels.
 - (3) Notification. The City shall notify adjacent communities, the State Departments of Ecology and Fish and Wildlife, and the Federal Insurance Administration about the proposed watercourse alteration at least 30 days prior to permit issuance.
 - (4) Maintenance of Alterations. The applicant shall maintain the altered or relocated portion of the watercourse to ensure that the flood-carrying capacity is not diminished. Maintenance shall be bonded for a period of five years and be in accordance with an approved maintenance program.

(Ord. 1456 § 5, Dec. 20th, 2016).

30.40.060 Performance standards—Areas of shallow flooding.

Uses in areas of shallow flooding shall adhere to the following standards, in addition to the general standards of Performance Standards—General Requirements, Section 30.40.040, and relevant specific standards of Performance Standards—Specific Uses, Section 30.40.050.

Alteration of a natural watercourse is strongly discouraged and the applicant must demonstrate that all alternatives have been considered. All permits from applicable federal and state permitting agencies should be obtained before the jurisdiction issues permit approval.

- (a) Residential Structures. New construction and substantial improvements of residential structures and manufactured homes within AO zones shall have the lowest floor (including basement) elevated above the highest grade adjacent to the building, one foot or more above the depth number specified in feet on the flood insurance map or at least two feet if no depth number is specified.
- (b) Nonresidential Structures. New construction and substantial improvements of nonresidential structures within AO zones shall either:
 - (1) Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site one foot or more above the depth number specified on the flood insurance map or at least two feet if no depth number is specified; or
 - (2) Together with attendant utility and sanitary facilities, be completely floodproofed to or above that level so that any space below that level 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. If this method is used, compliance shall be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications, and plans. Following construction of the structure, certifications shall be submitted to the City that record the actual (as-built) elevation to which the structure was floodproofed.
- (c) Drainage Paths. All development shall include adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.
- (d) Recreational Vehicles. Recreational vehicles placed on sites within AO zones on the flood insurance map(s) shall meet the requirements of this chapter.

(Ord. 1456 § 5, Dec. 20th, 2016).

30.40.070 Performance standards—Coastal high hazard areas.

Uses in all coastal high hazard areas shall adhere to the following standards, in addition to the general standards of Performance Standards—General Requirements, Section 30.40.040, and relevant specific standards of Performance Standards—Specific Uses, Section 30.40.050.

- (a) All new construction shall be located landward of the reach of mean high tide.
- (b) All new construction and substantial improvements shall be elevated on pilings and columns so that:
 - (1) The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated one foot or more above the base flood level; and
 - (2) The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one-percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).
- (c) Design Certification. The structural design, specifications, and plans for a proposed activity within a coastal high hazard area shall be developed or reviewed, and certified by a registered professional

engineer or architect that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the standards of this section.

- (d) Elevation Certification. The Planning Director shall obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures in zones V1-30 and VE, and whether or not such structures contain a basement. The Planning Director shall maintain a record of all such flood elevation information.
- (e) Space Below Lowest Floor and Obstruction. The space below the lowest floor of all new construction and substantial improvements shall be either free of obstruction or constructed with nonsupporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purposes of this section, a breakaway wall shall have a design safe loading resistance of not less than ten and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or state codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:
 - (1) Breakaway wall collapse shall result from water load less than that which would occur during the base flood; and
 - (2) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and nonstructural). Maximum wind and water loading values to be used in this determination shall each have a one-percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).
- (f) Use of Breakaway Walls. If breakaway walls are utilized, such enclosed space shall be used solely for parking of vehicles, building access, or storage, and shall not be used for human habitation.
- (g) Manufactured Homes. Manufactured homes to be placed or substantially improved in coastal high hazard areas shall meet the requirements of this chapter.
- (h) Recreational Vehicles. Recreational vehicles placed on sites within coastal high hazard areas shall meet the requirements of this chapter.

(Ord. 1456 § 5, Dec. 20th, 2016).

30.40.080 Uses and activities prohibited from frequently flooded areas.

- (a) Critical Facilities. Critical facilities are prohibited from frequently flooded areas to prevent damage to such facilities, to avoid costs that will be incurred by the public, and to maintain functionality of such facilities during flood events. If such a prohibition is unreasonable, an allowance for critical facilities in frequently flooded areas with the following specific conditions:
 - (1) Construction of new critical facilities shall be permissible within frequently flooded areas if no feasible alternative site is available.
 - (2) Critical facilities constructed within frequently flooded areas shall have the lowest floor elevated three feet or more above the level of the base flood elevation (100-year flood).
 - (3) Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters.

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- (4) Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.
 - (b) Wells Used for Potable Water. Water wells shall be located on high ground and are prohibited from the floodway.
 - (c) On-Site Sewage Disposal Systems. On-site sewage disposal systems are prohibited from the floodway, the channel migration zone, and the ten-year floodplain elevation.
 - (d) Construction in Floodways.
 - (1) New Construction Certification. Encroachments, including new construction, substantial improvements, fill, and other development, are prohibited within designated floodways unless certified by a registered professional engineer. Such certification shall demonstrate through hydrologic and hydraulic analyses, performed in accordance with standard engineering practice that the proposed encroachment will not result in any increase in flood levels during the occurrence of the base flood discharge.

Small projects that are solely to protect or create fish habitat and designed by a qualified professional may be allowed without certification, if the Planning Director determines that the project will not obstruct flood flows. Fish protection projects shall be reviewed on behalf of the City by a qualified professional in the field of hydraulics.

- (2) Residential Construction and Reconstruction. Construction and reconstruction of residential structures is prohibited within designated floodways, except for:
 - (A) Repairs, reconstruction, or improvements to a structure that do not increase the ground floor area; and
 - (B) Repairs, reconstruction, or improvements to a structure, for which the cost does not exceed 50 percent of the market value of the structure either:
 - (i) Before the repair or reconstruction is started, or
 - (ii) If the structure has been damaged and is being restored, before the damage occurred.

Improvement to a structure to correct existing violations of state or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and that are the minimum necessary to ensure safe living conditions or to structures identified as historic places may be excluded from the 50 percent.

- (3) If subsections (1) and (2) above are satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions.
- (e) Construction in Coastal High Hazard Areas.
 - (1) Fill for structural support of buildings shall be prohibited in coastal high hazard areas.
 - (2) Manmade alteration of sand dunes that would result in increasing the potential flood damage shall be prohibited in coastal high hazard areas.

(Ord. 1456 § 5, Dec. 20th, 2016).

30.40.090 Variances—Additional considerations for frequently flooded areas.

- (a) Additional Variance Considerations. In review of variance requests for activities within frequently flooded areas, the hearing examiner shall consider all technical evaluations, relevant factors, standards specified in this chapter; and
 - (1) The danger to life and property due to flooding, erosion damage, or materials swept onto other lands during flood events;

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- (2) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the proposed use;
 - (3) The importance of the services provided by the proposed use to the community;
 - (4) The necessity to the proposed use of a waterfront location, where applicable, and the availability of alternative locations for the proposed use that are not subject to flooding or erosion damage;
 - (5) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (6) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
 - (7) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems and streets and bridges.
- (b) Variances shall only be issued upon a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nuisances, fraud on or victimization of the public, or conflict with existing laws or ordinances. Unavoidable impacts to floodplain functions and values shall be mitigated in accordance with Mitigation Sequencing, Section 30.10.240;
 - (c) Variances shall not be issued within a designated floodway, if any increase in flood levels during the base flood discharge would result.

(Ord. 1456 § 5, Dec. 20th, 2016).