



# Whatcom County

COUNTY COURTHOUSE  
311 Grand Avenue, Ste #105  
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(360) 778-5010

## Agenda Bill Master Report

File Number: AB2021-408

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|                      |                            |                    |                                      |                      |              |
|----------------------|----------------------------|--------------------|--------------------------------------|----------------------|--------------|
| <b>File ID:</b>      | AB2021-408                 | <b>Version:</b>    | 1                                    | <b>Status:</b>       | Adopted      |
| <b>File Created:</b> | 07/12/2021                 | <b>Entered by:</b> | LCumming@co.whatcom.wa.us            |                      |              |
| <b>Department:</b>   | Public Works<br>Department | <b>File Type:</b>  | Ordinance Requiring a Public Hearing |                      |              |
| <b>Assigned to:</b>  | Council                    |                    |                                      | <b>Final Action:</b> | 09/14/2021   |
| <b>Agenda Date:</b>  | 09/14/2021                 |                    |                                      | <b>Enactment #:</b>  | ORD 2021-053 |

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Primary Contact Email: Sdraper@co.whatcom.wa.us

### **TITLE FOR AGENDA ITEM:**

Ordinance adopting amendments to Whatcom County Code Title 17 Flood Damage Prevention

### **SUMMARY STATEMENT OR LEGAL NOTICE LANGUAGE:**

The proposed ordinance adopts minor amendments to the Whatcom County Flood Damage Prevention Code (Title 17) that include the following:

Amendments necessary to comply with updated Community Rating System (CRS) Class prerequisites for freeboard

Amendments necessary to comply with updated FEMA policy document # 104-008-03 for Agricultural and Accessory Structures

Revisons to the variance process

The deadline to have Title 17 amendments adopted is 9/30/21

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### **HISTORY OF LEGISLATIVE FILE**

**Agenda Bill Master Report Continued (AB2021-408)**

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| <b>Date:</b> | <b>Acting Body:</b> | <b>Action:</b>   | <b>Sent To:</b> |
|--------------|---------------------|--|-----------------|
| 08/10/2021   | Council             | INTRODUCED FOR PUBLIC HEARING<br>Aye: 7 Browne, Buchanan, Byrd, Donovan, Elenbaas, Frazey, and Kershner<br>Nay: 0<br>Absent: 0 | Council         |
| 09/14/2021   | Council             | ADOPTED<br>Aye: 7 Browne, Buchanan, Byrd, Donovan, Elenbaas, Frazey, and Kershner<br>Nay: 0<br>Absent: 0                       |                 |

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**Attachments:** Staff Memo, Proposed Ordinance, Title 17 Clean, Title 17 with Comments

**PROPOSED BY: Public Works Department**

**INTRODUCTION DATE: August 10, 2021**

**ORDINANCE NO. 2021-053**

**ADOPTING AMENDMENTS TO WHATCOM COUNTY CODE TITLE 17 FLOOD DAMAGE  
PREVENTION**

**WHEREAS**, in January 2021 FEMA's National Flood Insurance Program (NFIP) Community Rating System (CRS) began implementing new minimum requirements or Class prerequisites for freeboard for all participating CRS communities; and

**WHEREAS**, Whatcom County is a participating community in the CRS program and is required to adopt a floodplain management ordinance that meets the new CRS Class prerequisites prior to the scheduled cycle verification visit on October 12, 2021; and

**WHEREAS**, the CRS Floodplain Management Specialist and State NFIP coordinator have reviewed Whatcom County Code Title 17 for compliance with the new CRS Class prerequisites and found that minor revisions are required; and

**WHEREAS**, staff has revised Whatcom County Code Title 17 to include the amendments required for compliance to maintain current CRS Class 6 rating, which provides a 20% reduction on flood insurance premiums to the community; and

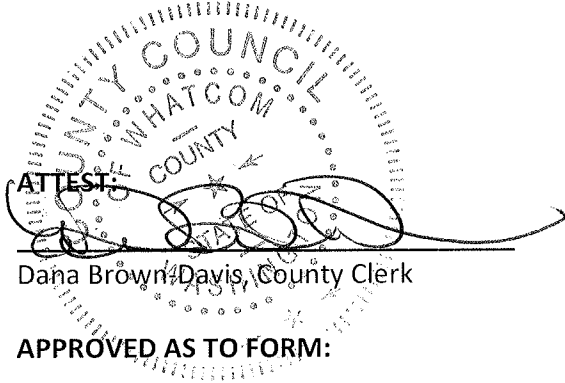
**WHEREAS**, failure to adopt these amendments prior to the date of cycle verification visit would reduce Whatcom County's CRS rating to a Class 9, which only provides for a 5% reduction on flood insurance premiums to the community; and

**WHEREAS**, staff included additional amendments to Whatcom County Code Title 17 for compliance with FEMA's recent policy update on agricultural and accessory structures including associated local variance process; and

**WHEREAS**, a public hearing on the amended Title 17 was held on September 14, 2021;

NOW, THEREFORE, BE IT ORDAINED by the Whatcom County Council that Whatcom County Code Title 17 is hereby amended as indicated in Exhibit A to this ordinance.

ADOPTED this 14th day of September, 2021.



APPROVED AS TO FORM:

*/s/ Christopher Quinn, approved via e-mail /JL*

Christopher Quinn  
Senior Civil Deputy Prosecuting Attorney

WHATCOM COUNTY COUNCIL  
WHATCOM COUNTY, WASHINGTON

A handwritten signature in black ink, appearing to read "Barry A. Buchanan", is written over a horizontal line. Below the line, the text "Barry Buchanan Council Chair" is printed.

Approved ( ) Denied

A handwritten signature in black ink, appearing to read "Satpal Singh Sidhu", is written over a horizontal line. Below the line, the text "Satpal Singh Sidhu, County Executive" is printed.

Date: 9/17/21

**EXHIBIT A (continued)**

Whatcom County Code  
Title 17 FLOOD DAMAGE PREVENTION

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**Title 17**

**FLOOD DAMAGE PREVENTION<sup>1</sup>**

**Chapters:**

- 17.04 General Provisions**
- 17.08 Definitions**
- 17.10 Regulatory Data**
- 17.12 Administration**
- 17.16 Flood Hazard Reduction Standards**
- 17.20 *Repealed***
- 17.24 Unauthorized Use of Motorized Vehicles Upon Flood Control Structures**

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<sup>1</sup> Prior legislation: Ord. dated 9/23/77.

**Chapter 17.04**  
**GENERAL PROVISIONS**

Sections:

|           |  |
|-----------|--|
| 17.04.010 | Findings of fact.                              |
| 17.04.020 | Statement of purpose and liability disclaimer. |
| 17.04.030 | Methods of reducing flood losses.              |
| 17.04.040 | Application of title.                          |
| 17.04.050 | Repealed.                                      |
| 17.04.060 | Abrogation and greater restrictions.           |
| 17.04.070 | Interpretation.                                |
| 17.04.080 | Compliance required.                           |
| 17.04.090 | Repealed.                                      |
| 17.04.100 | Severability.                                  |

**17.04.010 Findings of fact.**

The findings of fact are the following:

A. The flood hazard areas of Whatcom County are subject to periodic inundation which results 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, all of which adversely affect the public health, safety and general welfare.

B. Without taking appropriate care and precautions, development in floodplains and watersheds may increase flood heights, frequencies, and velocities, and may result in a greater threat to humans, damage to property, destruction of natural floodplain functions, and adverse impacts to water quantity, quality, and habitat. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.04.020 Statement of purpose and liability disclaimer.**

This title is enacted as an exercise of the police power of the county for the benefit of the public at large. It is not intended to create a special relationship with any individual, or individuals, nor to identify and protect any particular class of persons. The purpose of this title is to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas in a manner that does not adversely affect endangered species or their habitats. The degree of property and habitat protection required by this title is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on occasion. Flood heights may be increased by manmade or natural causes. This title does not imply that land outside of the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This title shall not create liability on the part of Whatcom County, any officer or employee thereof, or the Federal Insurance Administration, for any damages to property or habitat that result from reliance on this title or any administrative decision lawfully made thereunder. Nor shall the county or any officer, agent, or employee thereof incur or be held as assuming any liability by reason or in consequence of any permission, certificate of inspection, inspection or approval authorized herein, or issued or given as herein provided, or by reasons or consequence of any things done or acts performed pursuant to the provisions of this title. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.04.030 Methods of reducing flood losses.**

In order to accomplish its purposes, this title includes methods and provisions for:

A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

B. Requiring that uses vulnerable to floods, including facilities which serve such uses, shall be protected against flood damage at the time of initial construction;

C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

D. Controlling filling, grading, dredging, and other development which may increase flood damage; and

E. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.04.040 Application of title.**

This title shall apply to all special flood hazard areas, as defined in WCC 17.08.040, within the jurisdiction of Whatcom County. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.04.050 Basis for establishing areas of special flood hazard.**

*Repealed by Ord. 2017-056.* (Ord. 96-050 Exh. A; Ord. 90-94; Ord. 87-25 (part)).

**17.04.060 Abrogation and greater restrictions.**

This title is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this title and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.04.070 Interpretation.**

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

A. Considered as minimum requirements;

B. Liberally construed in favor of the governing body; and

C. Deemed neither to limit nor repeal any other powers granted under state statutes. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.04.080 Compliance required.**

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this title and other applicable regulations. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.04.090 Penalty for noncompliance.**

*Repealed by Ord. 2017-056.* (Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.04.100 Severability.**

The provisions and sections of this title shall be deemed separable and the invalidity of any portion of this title shall not affect the validity of the remainder. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**Chapter 17.08**  
**DEFINITIONS**

Sections:

|           |  |
|-----------|--|
| 17.08.010 | Generally.                             |
| 17.08.013 | Accessory structure.                   |
| 17.08.015 | Administrator.                         |
| 17.08.020 | Appeal.                                |
| 17.08.030 | Area of shallow flooding.              |
| 17.08.040 | Area of special flood hazard.          |
| 17.08.050 | Base flood.                            |
| 17.08.051 | Base flood elevation.                  |
| 17.08.053 | Basement.                              |
| 17.08.055 | Breakaway wall.                        |
| 17.08.057 | Coastal high hazard area.              |
| 17.08.058 | Critical facility.                     |
| 17.08.060 | Development.                           |
| 17.08.062 | Dry floodproofing.                     |
| 17.08.064 | Elevation certificate.                 |
| 17.08.066 | FEMA.                                  |
| 17.08.070 | Flood or flooding.                     |
| 17.08.080 | Flood insurance rate map (FIRM).       |
| 17.08.090 | Flood insurance study.                 |
| 17.08.092 | Flood protection elevation (FPE).      |
| 17.08.095 | Floodway.                              |
| 17.08.097 | Historic structure.                    |
| 17.08.100 | Lowest floor.                          |
| 17.08.110 | Manufactured home.                     |
| 17.08.120 | Manufactured home park or subdivision. |
| 17.08.130 | New construction.                      |
| 17.08.140 | Recreational vehicle.                  |
| 17.08.155 | Special flood hazard area (SFHA).      |
| 17.08.160 | Start of construction.                 |
| 17.08.170 | Structure.                             |
| 17.08.178 | Substantial damage.                    |
| 17.08.180 | Substantial improvement.               |
| 17.08.190 | Variance.                              |
| 17.08.193 | Watercourse.                           |
| 17.08.195 | Wet floodproofing.                     |
| 17.08.200 | Zone.                                  |

**17.08.010 Generally.**

Unless specifically defined below, words or phrases used in this title shall be interpreted so as to give them the meaning they have in common usage or to give this title its most reasonable application. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.013 Accessory structure.**

“Accessory structure” means a structure which is on the same parcel of property as the principal structure to be insured and the use of which is incidental to the use of the principal structure. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.08.015 Administrator.**

Whenever the term “administrator” is used it means the director of public works or his designee. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).



**17.08.020 Appeal.**

“Appeal” means a request for a review of the administrator’s interpretation of any provision of this title or a request for a variance. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.030 Area of shallow flooding.**

“Area of shallow flooding” means a designated AO or AH Zone on the flood insurance rate map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.040 Area of special flood hazard.**

“Area of special flood hazard” means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Areas of special flood hazard are designated on flood insurance rate maps with the letter A or V, including AE, AO, AH, A1-99 and VE. The area of special flood hazard is also referred to as the special flood hazard area or SFHA. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.050 Base flood.**

“Base flood” means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as “100-year flood.” Designation on maps always includes the letter A or V. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.051 Base flood elevation.**

“Base flood elevation” is the elevation of the base flood above the datum of the effective FIRM. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.08.053 Basement.**

“Basement” is any area of the structure having its floor subgrade (below ground level) on all sides, including a subgrade crawlspace. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.08.055 Breakaway wall.**

“Breakaway wall” means a wall that is not a 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 damages to the elevated portion of the building or supporting foundation system. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.057 Coastal high hazard area.**

“Coastal high hazard area” means the area subject to high velocity waters, including, but not limited to, storm surge or tsunamis. The area is designated on the FIRM as Zone V1-V30, VE or V. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.058 Critical facility.**

“Critical facility” means a facility necessary to protect the public health, safety, and welfare during a flood. Critical facilities include, but are not limited to: schools; nursing homes; hospitals; police, fire, and emergency operations installations; water and wastewater treatment plants; electric power stations; and installations which produce, use, or store hazardous materials or hazardous waste (other than consumer products containing hazardous substances or hazardous waste intended for household use). (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.08.060 Development.**

“Development” means any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, storage of equipment or materials, subdivision of land, removal of substantial amounts (greater than five percent) of vegetation, or alteration of natural site characteristics located within the area of special flood hazard. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.062 Dry floodproofing.**

“Dry floodproofing” means any combination of structural and nonstructural measures that prevent flood waters from entering a structure. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.08.064 Elevation certificate.**

“Elevation certificate” means the official form from FEMA used to provide elevation information necessary to ensure compliance with provisions of this title and determine the proper flood insurance premium rate. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.08.066 FEMA.**

“FEMA” means the Federal Emergency Management Agency, the agency responsible for administering the National Flood Insurance Program. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.08.070 Flood or flooding.**

“Flood or flooding” means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- A. The overflow of inland or tidal waters; and/or
- B. The unusual and rapid accumulation or runoff of surface waters from any source. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.080 Flood insurance rate map (FIRM).**

“Flood insurance rate map (FIRM)” means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.090 Flood insurance study.**

“Flood insurance study” means the official report provided by the Federal Insurance Administration that includes flood profiles, the flood boundary map, and the water surface elevation of the base flood. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.092 Flood protection elevation (FPE).**

“Flood protection elevation” means the elevation above the datum of the effective FIRM to which new and substantially improved structures including associated machinery or equipment and other service facilities must be protected from flood damage. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**Comment [TB1]:** Required to maintain FEMA  
CRS Class 6 rating

**17.08.095 Floodway.**

“Floodway” means the channel of a river or other watercourse and adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.097 Historic structure.**

“Historic structure” means any structure that is:

- A. Listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; or
- 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; or
- C. Individually listed on a state inventory of historic places in states with historic preservation 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:

1. By an approved state program as determined by the Secretary of the Interior; or
2. Directly by the Secretary of the Interior in states without approved programs. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.08.100 Lowest floor.**

“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 nonelevation design requirements of this title found at WCC 17.16.080(B). (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.110 Manufactured home.**

“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 connected to the required utilities. For floodplain management purposes, the term “manufactured home” also includes park trailers, travel trailers and other similar vehicles placed on a site for greater than 120 consecutive days. For insurance purposes, the term “manufactured home” does not include park trailers, travel trailers, recreational vehicles and other similar vehicles. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.120 Manufactured home park or subdivision.**

“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. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.130 New construction.**

“New construction” means structures for which the start of construction commenced on or after the effective date of the ordinance codified in this title. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part). Formerly 17.08.140).

**17.08.140 Recreational vehicle.**

“Recreational vehicle” is a vehicle which is:

- A. Built on a single chassis; and
- B. Four hundred square feet or less when measured at the largest horizontal projection; and
- 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. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A. Formerly 17.08.130).

**17.08.155 Special flood hazard area (SFHA).**

See WCC 17.08.040, Area of special flood hazard. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.08.160 Start of construction.**

“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. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.170 Structure.**

“Structure” means a walled and roofed building, including a gas or liquid storage tank that is principally above ground. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.178 Substantial damage.**

“Substantial damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.08.180 Substantial improvement.**

“Substantial improvement” means any repair, 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 either:

- A. Before the start of construction of the improvement or repair; or
- B. Before the damage occurred, if the structure has been damaged and is being restored.

For the purpose of this definition, “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term does not, however, include either:

C. Any project for improvement of a structure to correct pre-cited existing violations of state or local health, sanitary, or safety code specifications which have been previously identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or

D. Any alteration of a historic structure; provided, that the alteration will not preclude the structure’s continued designation as a historic structure. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.190 Variance.**

“Variance” means a grant of relief from the requirements of this title which permits construction in a manner that would otherwise be prohibited by this title. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.08.193 Watercourse.**

“Watercourse” means only the channel and banks of an identifiable watercourse, and not the adjoining floodplain areas. The flood-carrying capacity of a watercourse refers to the flood-carrying capacity of the channel (except in the case of alluvial fans, where a channel is not typically defined). (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.08.195 Wet floodproofing.**

“Wet floodproofing” means permanent or contingent measures applied to a structure and/or its contents that prevent or provide resistance to damage from flooding by using flood-resistant materials and by allowing water to enter and exit the structure. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.08.200 Zone.**

“Zone” means one or more areas delineated on the FIRM. The following zones may be used on the adopted FIRM. The special flood hazard area is comprised of the A and V Zones.

- A: SFHA where no base flood elevation is provided.

- A#: numbered A Zones (e.g., A7 or A14), SFHA with a base flood elevation.
- AE: SFHA with a base flood elevation.
- AO: SFHA subject to inundation by shallow flooding, usually resulting from sheet flow on sloping terrain, with average depths between one and three feet. Average flood depths are shown.
- AH: SFHA subject to inundation by shallow flooding (usually areas of ponding) with average depths between one and three feet. Base flood elevations are shown.
- D: area of undetermined but possible flood hazard.
- V: the SFHA subject to coastal high hazard flooding including waves of three feet or greater in height. There are three types of V Zones: V, V#, and VE, and they correspond to the A Zone designations.
- Shaded X: areas of two-tenths of one percent annual chance flood; areas of one percent annual chance flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from one percent annual chance flood.
- Unshaded X: areas determined to be outside the two-tenths of one percent annual chance floodplain. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**Chapter 17.10**  
**REGULATORY DATA**

Sections:

- 17.10.010 Basis for establishing special flood hazard area.
- 17.10.020 Flood hazard data.
- 17.10.030 New regulatory data.

**17.10.010 Basis for establishing special flood hazard area.**

A. The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for Whatcom County, Washington and Incorporated Areas," dated January 18, 2019, and any revisions thereto, with an accompanying flood insurance rate map (FIRM), and any revisions thereto, are hereby adopted by reference and declared to be a part of this title. The flood insurance study and the FIRM are on file at the department of public works.

B. The administrator shall make interpretations where needed as to the exact location of the boundaries of the SFHA where there appears to be a conflict between the mapped SFHA boundary and actual field conditions, as determined by the base flood elevation and ground elevations. The applicant may appeal the administrator's interpretation of the location of the boundary in accordance with WCC 17.12.060.

C. The applicant may officially have a structure or property removed from the SFHA by obtaining a letter of map amendment (LOMA) with FEMA. A LOMA establishes a structure or property's location in relation to the SFHA. LOMAs are usually issued because a property has been inadvertently mapped as being in the floodplain, but is actually on natural high ground above the base flood elevation. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.10.020 Flood hazard data.**

A. The base flood elevation for the SFHAs delineated as Zone AE of Whatcom County, Washington, shall be as delineated on the 100-year flood profiles in "The Flood Insurance Study for Whatcom County, Washington and Incorporated Areas."

B. The base flood elevation for each SFHA delineated as a Zone AH or Zone AO shall be that elevation (or depth) delineated on the flood insurance rate map. Where base flood depths are not available in Zone AO, the base flood elevation shall be considered to be two feet above the highest grade adjacent to the structure.

C. The base flood elevation for all other SFHAs delineated as Zone A shall be as defined in subsection F of this section and WCC 17.10.030(C).

D. The flood protection elevation shall be the base flood elevation plus one foot.

E. The floodway shall be as delineated on the flood insurance rate map or in accordance with subsection F of this section and WCC 17.10.030(C).

F. Where base flood elevation and floodway data have not been provided in special flood hazard areas, the administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, local, or other source. In cases where the administrator is unable to obtain any base flood elevation, the flood protection elevation shall be two feet above the highest adjacent grade.

G. The base flood elevation for the SFHAs delineated as coastal Zone VE and AE of Whatcom County, Washington, shall be as delineated on the flood insurance rate maps and as found in "The Flood Insurance Study for Whatcom County, Washington and Incorporated Areas." (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.10.030 New regulatory data.**

A. All requests to revise or change the flood hazard data, including requests for a letter of map revision and a conditional letter of map revision, shall be reviewed by the administrator.

1. The administrator shall not sign the community acknowledgment form for any requests based on filling or other development, unless the applicant for the letter documents that such filling or development is in compliance with this title.

2. The administrator shall not approve a request to revise or change a floodway delineation until FEMA has issued a conditional letter of map revision (CLOMR) that approves the change.

B. If an applicant disagrees with the regulatory data prescribed by this title, he/she may submit a detailed technical study needed to replace existing data with better data in accordance with FEMA mapping guidelines. If the data in question are shown on the published FIRM, the submittal must also include a request to FEMA for a conditional letter of map revision.

C. Where base flood elevation or floodway delineation is not available in accordance with WCC 17.10.020, applicants for approval of new subdivisions and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or five acres, whichever is the lesser, shall include such data with their permit applications, unless waived by the administrator. This provision does not apply to applications for permits for small projects on large lots, such as constructing a single-family home; in these situations, the administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, local or other authoritative source. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**Chapter 17.12**  
**ADMINISTRATION**

Sections:

- 17.12.010 Establishment of floodplain development permit.
- 17.12.012 Requirements for floodplain development permit application within a SFHA.
- 17.12.020 Administrative department – Designated.
- 17.12.030 Administrative department – Duties and responsibilities.
- 17.12.040 Variances – Process.
- 17.12.050 Variances – Conditions for issuance.
- 17.12.060 Appeals.
- 17.12.070 Enforcement.

**17.12.010 Establishment of floodplain development permit.**

A floodplain development permit shall be obtained before construction or development begins within any area of special flood hazard established in WCC 17.10.010. The permit shall be for all development as set forth in WCC 17.08.060. In situations where another county permit is required for development, the floodplain development permit may be issued in the form of conditions within the other county permit. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.12.012 Requirements for floodplain development permit application within a SFHA.**

Application for a floodplain development permit within a SFHA shall be made through the development application process administered by the department of planning and development services or on forms furnished by the department of public works if other local permits are not required, and may include, but not be limited to:

A. One or more site plans drawn to scale showing:

1. The nature, location, dimensions, and elevations of the property;
2. Names and locations of all water bodies, waterways, and drainage facilities within 200 feet of the site;
3. Existing and proposed structures, fill, pavement and other impervious surfaces, and sites for storage of materials;
4. Existing and proposed drainage facilities including, but not limited to, swales, storm sewers, overland flow paths, and detention facilities;
5. The elevation of the 100-year floods, where the data are available;
6. Existing and proposed contours at intervals sufficient to accurately determine the extent of proposed changes if the proposed project involves grading, excavation, or filling;
7. Existing vegetation and proposed vegetation removal and revegetation.

B. If the proposed project will be elevated, including a new structure, substantial improvement, or repairs to a substantially damaged structure, the application shall include the flood protection elevation for the building site and the proposed elevations of the following:

1. The top of lowest floor (including basement, crawlspace, or enclosure floor).
2. The top of the next higher floor.
3. The bottom of the lowest horizontal structural member (in V Zones only).
4. The top of the slab of an attached garage.



5. The lowest elevation of machinery or equipment servicing the structure.
6. The lowest adjacent (finished) grade next to structure.
7. The highest adjacent (finished) grade next to structure.
8. The lowest adjacent grade at the lowest elevation of a deck or stairs, including structural support.

C. If the proposed project will be wet or dry floodproofed, including a new structure, substantial improvement, or repairs to a substantially damaged nonresidential structure, the application shall include the flood protection elevation for the building site and the elevation in relation to the datum of the effective FIRM to which the structure will be floodproofed and a certification by a registered professional engineer or licensed architect that the floodproofing methods meet the floodproofing criteria in WCC 17.16.090 or 17.16.110.

D. The application shall include a description of the extent to which any watercourse will be altered or relocated as a result of proposed development, and shall also submit a request for a conditional letter of map revision (CLOMR), where required by FEMA. The project will not be approved unless FEMA issues the CLOMR and the provisions of the letter are made part of the permit requirements.

E. The applicant shall submit a finished construction elevation certificate completed and certified by a licensed professional surveyor prior to occupancy.

F. Compliance with FEMA's National Flood Insurance Program, including the protection standards for critical habitats for listed species, shall be demonstrated through a habitat assessment, and, if necessary, a mitigation plan done in accordance with the FEMA Regional Guidance for the Puget Sound Basin. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.12.020 Administrative department – Designated.**

The department of public works will administer and implement this title by granting or denying floodplain development permit applications in accordance with its provisions. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.12.030 Administrative department – Duties and responsibilities.**

The duties of the department of public works shall include, but not be limited to:

A. Permit Review. The department of public works shall:

1. Review all floodplain development permit applications to determine that the permit requirements of this title have been satisfied;
2. Review all floodplain development permit applications to determine that all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required;
3. Review all floodplain development permit applications to determine if the proposed development adversely affects the flood-carrying capacity of the area of special flood hazard, and prohibit those developments that are determined to adversely affect the flood-carrying capacity. For purposes of this section, "adversely affects flood-carrying capacity" means that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will increase the water surface elevation of the base flood more than one foot at any point;
4. Review and approve all elevation certificates to determine if the structure is in compliance with this title;
5. Review all development permit applications within the SFHA to ensure the proposed development is compliant with FEMA's National Flood Insurance Program protection standards for critical habitats of species listed under the Endangered Species Act;
6. Notify the department of planning and development services of the review and decision results of the above in a timely manner.

B. Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with Chapter 17.10 WCC, the department of public works shall obtain, review, and reasonably use any base flood elevation and floodway data available from a federal, state, or other source in order to administer Chapter 17.16 WCC.

C. Information to Be Obtained and Maintained. The department of public works shall:

1. When base flood elevation data is provided through the flood insurance study or required as in subsection B of this section, obtain and record the actual 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;
2. For all new or substantially improved nonresidential structures that are floodproofed:
  - a. Verify and record the actual elevation to which the structure has been floodproofed (in relation to datum specified on the FIRM); and
  - b. Maintain certification by a registered professional engineer that the floodproofing methods for any structure meet the criteria as provided in WCC 17.16.090;
3. Maintain for public inspection all records pertaining to the provisions of this title;
4. Submit reports as required by FEMA for the National Flood Insurance Program.

D. Alteration of Watercourse.

1. Prior to any alteration or relocation of a watercourse, the department of planning and development services shall provide notification to adjacent communities and the Washington State Department of Ecology in accordance with Chapter 16.08 WCC.
2. The department of public works shall:
  - a. Provide evidence of such notification to FEMA;
  - b. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

E. Required Submission of Additional Information. The administrator shall have authority to require the applicant to submit information certified by licensed professional land surveyors, architects, or engineers as may be reasonably necessary to assure conformance with the standards of this title. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.12.040 Variances – Process.**

A. ~~The hearing examiner/administrator as established by Whatcom County shall hear, review and decide requests for variances from the requirements of this title.~~

B. In deciding variance requests, the hearing examiner/administrator shall consider WCC 17.12.050, all technical evaluations, relevant factors, and standards specified in other sections of this title; and:

1. The danger that materials may be swept onto other land to the injury of others;
2. The danger to life and property due to flooding or erosion damage;
3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
4. The importance of the services provided by the proposed facility to the community;
5. The necessity to the facility of a waterfront location, where applicable;

**Comment [TB2]:** Variances to flood code do not require hearings examiner decision or public notice, this amendment is being proposed to reduce burden to applicant and staff when processing variances for Ag. Structures per updated FEMA policy #104-008-03

**Comment [TB3]:** Same as above

6. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
7. The compatibility of the proposed use with existing and anticipated development;
8. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
9. The safety of access to the property in times of flood for ordinary and emergency vehicles;
10. The expected heights, velocity, duration, rate of rise, the sediment transport of the flood waters, and the effects of wave action, if applicable, expected at the site;
11. 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, water systems, and streets and bridges; and
12. The potential of the proposed development to adversely affect endangered species and proposed mitigation measures to ensure compliance with the Endangered Species Act.

C. Upon consideration of the factors of subsection B of this section and the purposes of this title, the ~~hearing-examiner~~ ~~administrator~~ may attach such conditions to the granting of variances as deemed necessary to further the purposes of this title.

D. The ~~hearing-examiner~~ ~~administrator~~ shall maintain the records of all actions and report any variances to the Federal Insurance Administration upon request. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**Comment [TB4]:** Variances to flood code do not require hearings examiner decision or public notice, this amendment is being proposed to reduce burden to applicant and staff when processing variances for Ag. Structures per updated FEMA policy #104-008-03

**Comment [TB5]:** Same as above

**17.12.050 Variances – Conditions for issuance.**

A. Generally, the only condition under which a variance from the elevation standard may be issued is 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, provided WCC 17.12.040(B)(1) through (12) have been fully considered. As the lot size increases, the technical justification required for issuing the variance increases.

B. Variances may be issued for the reconstruction, rehabilitation, or restoration of historic structures without regard to the procedures set forth in the remainder of this section.

C. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

D. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

E. Variances shall only be issued upon:

1. A showing of good and sufficient cause;
2. A determination that failure to grant the variance would result in exceptional hardship to the applicant;
3. 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 as identified in WCC 17.12.040(B), or conflict with existing local laws or ordinances; and
4. A determination that the proposed development is compliant with the Endangered Species Act.

F. Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its

inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.

G. Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except subsection A of this section, and otherwise complies with WCC 17.16.020 and 17.16.030.

H. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a 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. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.12.060 Appeals.**

A. Any aggrieved party may appeal any order, variance, condition of approval, or alleged error made by the administrator in the administration or enforcement of this chapter to the hearing examiner as established by Whatcom County, who shall have the authority to hear and decide such appeals.

**Comment [TB6]:** "Hearings examiner as established by Whatcom County" was removed from section 17.12.040 (variances) but is needed for appeals.

B. An appeal shall be filed within 14 days of the issuance of a final permit decision. For decisions associated with a project permit, as defined in Chapter 20.97 WCC, the final permit decision is when the project permit is issued. For decisions not associated with a project permit, the final permit decision is when the floodplain development permit is issued by the administrator.

C. Appeals shall be processed in accordance with Chapter 22.05 WCC and accompanied by a fee as specified in the unified fee schedule.

D. The applicant, any party of record, or any county department may appeal any final decision of the hearing examiner to superior court within 10 business days of the final decision of the hearing examiner. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.12.070 Enforcement.**

A. Any person, firm, or corporation violating any of the provisions of this title may be subject to enforcement actions and penalties allowed by county code, as amended, for the applicable development permit, approval, or license required for the floodplain development or action. The administrator is hereby authorized to enforce the provisions of this chapter.

B. The enforcement process and penalties contained in Chapter 20.94 WCC are hereby adopted in full for enforcement of this chapter, except for WCC 20.94.010 (Purpose) and WCC 20.94.060 (Appeals); provided, that each occurrence of the term "zoning administrator" shall be substituted with "administrator." (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**Chapter 17.16**

**FLOOD HAZARD REDUCTION STANDARDS**

Sections:

- 17.16.010 Standards.
- 17.16.020 Anchoring.
- 17.16.030 Construction materials and methods.
- 17.16.040 Utilities.
- 17.16.050 Subdivision proposals.
- 17.16.060 Review of building permits.
- 17.16.070 *Repealed.*
- 17.16.080 Residential construction.
- 17.16.090 Nonresidential construction.
- 17.16.095 Critical facilities.
- 17.16.100 Manufactured homes.
- 17.16.110 Wet floodproofing.
- 17.16.115 Recreational vehicles.
- 17.16.120 Floodways.
- 17.16.125 Standards for AE and A1-30 Zones with base flood elevations but no floodways.
- 17.16.130 Standards for shallow flooding areas (AO Zones).
- 17.16.140 Coastal high hazard areas.

**17.16.010 Standards.**

The standards set forth in WCC 17.16.020 through 17.16.140 are required in all areas of special flood hazards. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.16.020 Anchoring.**

A. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.

B. All manufactured homes must likewise 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 (reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques). (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.16.030 Construction materials and methods.**

A. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

B. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

C. Electrical, heating, ventilation, plumbing and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated to or above the flood protection elevation or located so as to prevent water from entering or accumulating within the components during conditions of flooding. ~~Locating such equipment below the base flood elevation may cause flood insurance premiums to be increased.~~ (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**Comment [TB7]:** Required to maintain FEMA CRS Class 6 rating

**Comment [TB8]:** Not necessary as equipment below the BFE/FPE is not allowed

**17.16.040 Utilities.**

A. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

B. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

C. On-site waste storage and disposal systems shall be located to avoid impairment to them, or contamination from them, during flooding.

D. Water supply wells associated with new development shall be located where they are not subject to ponding and are not in the floodway. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.16.050 Subdivision proposals.**

A. All subdivision proposals shall:

1. Be consistent with the need to minimize flood damage.
2. Have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
3. Have adequate drainage provided to reduce exposure to flood damage.

B. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be developed in accordance with WCC 17.10.030(C). (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.16.060 Review of building permits.**

Where elevation data is not available, either through the flood insurance study or from another authoritative source (WCC 17.10.010 and 17.12.030(B)), applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above the highest adjacent grade in these zones may result in higher insurance rates. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.16.070 Specific standards.**

*Repealed by Ord. 2017-056.* (Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.16.080 Residential construction.**

A. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to or above the flood protection elevation, as determined in accordance with WCC 17.10.020(D).

B. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood waters. 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 on different sides of each enclosed area having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;
2. The bottom of all openings shall be no higher than one foot above grade either inside or outside of the opening in the crawlspace;
3. Openings may be equipped with screens, louvers, or other coverings or devices; provided, that they permit the automatic entry and exit of flood waters.

C. Subgrade crawlspaces are prohibited unless the following conditions are met:

1. The interior grade of a crawlspace below the base flood elevation must not be more than two feet below the lowest adjacent exterior grade;
2. The height of the subgrade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall, must not exceed four feet at any point;

3. A drainage system designed to adequately drain the subgrade crawlspace area (e.g., subsurface drains or sump pump system) once flood waters have receded must be provided; and
4. The crawlspace must comply with applicable FEMA guidance (FEMA Technical Bulletin 11, Crawlspace Construction for Buildings Located in Special Flood Hazard Areas, or updated guidance).

The administrator will notify the applicant that construction of a subgrade crawlspace will likely impact flood insurance premiums. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.16.090 Nonresidential construction.**

New construction and substantial improvement of any commercial, accessory, agricultural, industrial or other nonresidential structure, together with attendant utility and sanitary facilities, shall:

- A. Have the lowest floor, including basement, elevated to the level of the flood protection elevation. The space below the lowest floor must meet the standards in WCC 17.16.080(B) and (C); or
- B. Be dry floodproofed so that:
  1. Below the flood protection elevation the structure is watertight with walls substantially impermeable to the passage of water; and
  2. Structural components are capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
  3. The design and methods of construction are certified by a registered professional engineer 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 certifications shall be as set forth in WCC 17.12.030(E) and shall be provided by the applicant as required by the department of public works; or
- C. Be wet floodproofed in compliance with the requirements of WCC 17.16.110.

Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building constructed to the base flood level will be rated as one foot below that level). (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.16.095 Critical facilities.**

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the SFHA (100-year floodplain). Construction of new critical facilities shall be permissible within the floodplain if no feasible alternative site is available. Critical facilities constructed within the floodplain shall have the lowest floor elevated two feet above the base flood elevation. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into flood waters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible without adversely affecting the flood-carrying capacity of the SFHA. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.16.100 Manufactured homes.**

All manufactured homes to be placed or substantially improved shall be:

- A. Elevated on a permanent foundation in accordance with WCC 17.16.080 if within Zones A, AE, AH, and AO, and subject to WCC Title 15.
- B. Elevated on a permanent foundation in accordance with WCC 17.16.140 if within Zone V or VE.
- C. Securely anchored to an adequately anchored foundation system in accordance with the provisions of WCC 17.16.020(B). (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.16.110 Wet floodproofing.**

A. Wet floodproofing is allowed for the following types of nonresidential construction:

The Whatcom County Code is current through Ordinance 2019-031, passed April 9, 2019, and Resolution 2019-022, passed April 9, 2019.

1. Wet floodproofing is allowed without a variance for enclosed areas below the flood protection elevation that are used solely for parking, access, or limited storage, including attached and detached garages.

2. Wet floodproofing is allowed with a variance for the types of structures listed below; ~~however, the administrator may waive the requirement for a formal variance,~~ provided the proposal meets the conditions of subsection B of this section and applicable FEMA guidance (FEMA Technical Bulletin 7, Wet Floodproofing Requirements, or updated guidance).

**Comment [TB9]:** A Variance for Ag. structures is required per updated FEMA policy document #104-008-03

a. Structures functionally dependent on close proximity to water.

b. Historic structures.

c. Accessory structures that do not exceed a maximum value of \$25,000 for the cost of construction and are designed to have a low potential for structural damage. The market value of construction shall be determined by the administrator in accordance with the valuation procedure used when setting building permit fees.

d. Agricultural structures used exclusively in connection with the production, harvesting, storage, drying, or raising of agricultural commodities, including livestock, if they are designed to have a low potential for structural damage.

B. Each structure that is wet floodproofed shall meet the following standards:

1. It shall comply with the floodway encroachment provisions of WCC 17.16.120.

2. It shall be anchored to prevent flotation, collapse, and lateral movement.

3. All portions of the structure below the flood protection elevation shall be constructed of flood-resistant materials.

4. Service utilities such as mechanical, electrical, and heating equipment shall meet the standards of WCC 17.16.030(C) and 17.16.040.

5. It shall have openings to allow free flowage of water that meet the criteria in WCC 17.16.080(B).

6. It shall be designed to have a low potential for structural damage from flood inundation, scouring, velocities, and debris impact.

7. The intended use of the structure shall have a low damage potential for content damage or an emergency operation plan to remove the contents.

8. The project shall meet all other requirements of this title. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A).

**17.16.115 Recreational vehicles.**

Recreational vehicles placed on sites within Zones A, AE, AH, AO, V, and VE shall either:

A. Be on the site for fewer than 120 consecutive days; and

B. Be fully licensed and ready for highway use, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and having no permanently attached additions; or

C. Meet the requirements of WCC 17.16.100 and anchoring requirements for manufactured homes. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A).

**17.16.120 Floodways.**

Located within areas of special flood hazard established in WCC 17.10.010 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:



A. Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

B. Construction or reconstruction of residential structures is prohibited within designated floodways, except for the following:

1. Repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; provided, that the cost of which does not exceed 50 percent of the market value of the structure either (a) before the repair, reconstruction, or improvement is started; or (b) before the damage occurred, if the structure has been damaged and is being restored. Work done on structures 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 shall not be included in the 50 percent;
2. Repairs, replacement, reconstruction, or improvements to existing farmhouses located in designated floodways and located on designated agricultural lands that do not increase the building's total square footage of encroachment and are consistent with all requirements of WAC 173-158-075;
3. Repairs, replacement, reconstruction, or improvements to substantially damaged residential dwellings other than farmhouses that do not increase the building's total square footage of encroachment and are consistent with all requirements of WAC 173-158-076; or
4. Repairs, reconstruction, or improvements to residential structures identified as historic structures that do not increase the building's dimensions.

C. If the provisions of subsections A and B of this section are met, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this chapter. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.16.125 Standards for AE and A1-30 Zones with base flood elevations but no floodways.**

In areas with base flood elevations (but a regulatory floodway has not been designated), no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE 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 one foot at any point within the community. (Ord. 2019-005 Exh. A).

**17.16.130 Standards for shallow flooding areas (AO Zones).**

Shallow flooding areas appear on FIRMs as AO Zones with depth designations. The base flood depths in these zones range from one to three feet where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. In these areas, the following provisions apply:

A. New construction and substantial improvements of residential structures within AO Zones shall have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, one foot above the depth number specified on the FIRM (at least two feet above the highest adjacent grade if no depth number is specified).

B. 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, to one foot above the depth number specified on the FIRM (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 as in WCC 17.16.090(B)(3).

C. Adequate drainage paths around structures on slopes to guide flood waters around and away from proposed structures shall be provided. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**17.16.140 Coastal high hazard areas.**

Located within areas of special flood hazard established in WCC 17.10.020 are coastal high hazard areas, designated as Zones V and VE. These areas have special flood hazards associated with high velocity waters from tidal surges and, therefore, in addition to meeting all applicable provisions in this title, the following provisions shall also apply:

A. All new construction and substantial improvements in Zones V and VE 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 to or above the flood protection elevation; 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). A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of subsections (A)(1) and (2) of this section.

B. 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 V and VE, and whether or not such structures contain a basement. The local administrator shall maintain a record of all such information.

C. All new construction shall be located landward of the reach of mean high tide.

D. Provide that all new construction and substantial improvements have the space below the lowest floor either free of obstruction or constructed with nonsupporting breakaway walls, open wood latticework, 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 purpose of this section, a breakaway wall shall have a design safe loading resistance of not less than 10 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 a 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).

E. If breakaway walls are utilized, such enclosed space shall be usable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation.

F. Prohibit the use of fill for structural support of buildings.

G. Prohibit manmade alteration of sand dunes which would increase potential flood damage. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 96-050 Exh. A; Ord. 87-25 (part)).

**Chapter 17.20**  
**FLOOD CONTROL**  
**MAINTENANCE PROGRAM**

**(Repealed by Ord. 2008-047)**

**Chapter 17.24**

**UNAUTHORIZED USE OF**

**MOTORIZED VEHICLES UPON FLOOD CONTROL STRUCTURES**

Sections:

- 17.24.010 Definitions.
- 17.24.020 Unauthorized use of motorized vehicle.
- 17.24.030 Violation – Penalty.

**17.24.010 Definitions.**

The definitions set forth in this section shall apply throughout this chapter.

- A. “County” means Whatcom County, unless otherwise noted.
- B. “Flood control structure” means any structure, whether natural or manmade in origin, that operates, or is intended, to contain, channelize, direct or otherwise control the flow of water along or near the banks of the Nooksack River.
- C. “Motorized vehicle” means any vehicle that is motor-driven, whether by internal combustion engine or electric motor, and any attachments thereto.
- D. “Nooksack River” means the river commonly known as the Nooksack River, along with its North, Middle, and South Forks, as more precisely defined in WAC 173-18-410, as now written or hereinafter amended, and the channels within which this river and its forks flow, within Whatcom County.
- E. “Proper authorization” means use of a motorized vehicle for purposes of inspection, maintenance, improvement, or construction of flood control structures, or for access for legitimate agricultural purposes:
  - 1. By immediate family members or current employees of the owner or tenant of the land upon which the flood control structure is located, under the authority and direction of that owner or tenant; or
  - 2. Under the authority and with the current permission of the public agencies responsible for flood control activities within the county.

The claim of proper authorization is an affirmative defense which must be pled prior to hearing or trial, and which the defendant must prove by a preponderance of the evidence. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 2003-002).

**17.24.020 Unauthorized use of motorized vehicle.**

It is unlawful for any person to operate, or to ride upon, a motorized vehicle on any flood control structure within 3,000 feet of the Nooksack River, unless done with proper authorization. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 2003-002).

**17.24.030 Violation – Penalty.**

Violation of this chapter shall constitute a Class 1 civil infraction under the authority granted the county in Chapter 7.80 RCW. Each violation hereof shall be punishable by a maximum penalty or default amount as set forth in RCW 7.80.120, or any successor statute thereto. All violations shall be charged, heard, and determined in accordance with the procedures set forth in Chapter 7.80 RCW. Employees of the Whatcom County public works department, river and flood division, or its successor agency, if any there be, as well as all others who are otherwise authorized to enforce ordinances of this county, are hereby authorized to enforce the provisions of this title, consistent with the provisions of Chapter 7.80 RCW.

After having been found to have committed two infractions for violations of the provisions of this chapter, any person who further violates the provisions of this chapter shall be guilty of a misdemeanor, and shall be subject to

criminal penalties including a fine of not more than \$1,000, together with statutory assessments and any costs of action, and imprisonment in the county jail for a period of not more than 90 days.

In addition to the civil and criminal remedies provided for above, the county or the owner(s) of the land affected by the violation of the provisions of this chapter may bring such injunctive, declaratory or other actions as deemed necessary, and as otherwise allowed by law, to ensure that violations are prevented or cease, and to otherwise enforce the provisions of this chapter. (Ord. 2019-005 Exh. A; Ord. 2017-056 Exh. A; Ord. 2003-002).