



CASTLE ROCK CITY COUNCIL AGENDA

Regular Meeting: Monday, May 8, 2023
7:30 PM

Location
Castle Rock Senior Center
222 Second Ave SW
Castle Rock, WA 98611

AGENDA

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1. CALL TO ORDER

- a. Pledge of Allegiance
- b. Roll Call
- c. Changes to Agenda

2. PROCLAMATIONS & PRESENTATIONS

- a. Jessica Aylesworth, Castle Rock High School Student: "Effects of Water Conservation Pots on Growth of Woody Plants"

3. CITIZEN COMMENTS - maximum 3 minutes

4. DEPARTMENT REPORTS

- City Attorney Frank Randolph
- Police Chief Charlie Worley
- Public Works Director Dave Vorse
 1. Annual Water Quality Report - 2022 (page 3-4)
- City Engineer Tom Gower
- Deputy Clerk CeLina Hart

5. COUNCIL AND AD HOC COMMITTEE REPORTS

- Mayor / Mayor Pro-Tempore / Councilmembers
- CRCDA Representative

6. PUBLIC HEARINGS

7. CONSENT AGENDA

- a. Approve the minutes of the April 24, 2023 Regular Council Meeting. (page 5-6)
- b. Approve the April 2023 invoices as described in the Fund Transaction Summary Report in the amount of \$947,054.84. (page 7-8)

8. OLD BUSINESS

9. NEW BUSINESS

- a. Washington State Department of Transportation (WSDOT) is proposing two options during stage 2

construction when the north side (upstream) of the bridge is removed. WSDOT requests Council direction.

- Option 1 - Restrict access to pedestrians during stage 2 construction.
- Option 2 - Provide a shuttle service during daytime hours daily from 7:00 AM - 5:00 PM.

b. SR411 bridge construction contractor is tentatively proposing two 12-hour temporary closures for the installation of the water main. Proposed dates are Monday, May 15th and Tuesday, May 16th overnight from 6:00 PM - 6:00 AM.

c. Ordinance No. 2023-05, an ordinance of the City of Castle Rock relating to Flood Damage Prevention; amending Chapter 15.24 of the Castle Rock Municipal Code. (page 9-66)

10. OTHER BUSINESS

11. ADJOURNMENT

NEXT REGULAR COUNCIL MEETINGS:

<u>2Q23</u>	<u>3Q23</u>	<u>4Q23</u>	<u>1Q24</u>
April 10	July 10	October 09	January 08
April 24	July 24	October 23	January 22
May 08	August 14	November 13	February 12
May 22	August 28	November 27	February 26
June 12	September 11	December 11	March 11
June 26	September 25	Wednesday, December 27	March 25

Non-Discrimination Statement: This institution is an equal opportunity provider and employer. If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Program Discrimination Complaint Form, found online at https://www.ascr.usda.gov/sites/default/files/Complain_combined_6_8_12_508_0.pdf or at any USDA office, or call 866.632.9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter by mail to USDA, Office of the Assistant Secretary for Civil Rights, 1400 Independence Ave, SW, Stop 9410, Washington, DC 20250-9410 or email to program.intake@usda.gov or by fax (202) 690-7442.

Title VI: The City of Castle Rock ensures compliance with Title VI of the Civil Rights Act of 1964 and American Disabilities Act of 1990 by prohibiting discrimination against any person on the basis of race, color, national origin, sex or disabilities in the provision of benefits and services from its federal assisted programs and activities. If you need special accommodations to participate in this meeting, please contact Carie Cuttonaro at 360.274.8181 by 9:00 a.m. three days prior to the meeting.

City Council may add and take action on other items not listed on this Agenda.

Annual Drinking Water Quality Report 2022

Castle Rock Water System

CASTLE ROCK, WASHINGTON – PUBLIC WATER SYSTEM #11800

We are pleased to present to you the **2022** Annual Quality Water Report in accordance with EPA regulations. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our primary water source is **the Cowlitz River. Additionally, there are 4 seasonal and 2 emergency deep water wells.** Because we use both surface water and ground water our susceptibility rating is ranked 'high.' We have completed a source water assessment that provides more information such as potential sources of contamination, which is available from our office.

I am pleased to report that our drinking water is safe and meets Federal and State requirements.

If you have any questions about this report or concerning your water utility, please contact **David Vorse, Public Works Director, at Castle Rock Public Works Department, (360) 274-7478.** We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled City Council meetings. They are held on **the second and fourth Monday of each month at 7:30 p.m. in the Castle Rock Senior Center, located at 141 A Street SW in Castle Rock, WA.**

The Castle Rock Water System routinely monitors for analytes in your drinking water according to Federal and State laws. The following table shows the results of our monitoring for the period of January 1st to December 31st, **2022.** All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some analytes. It is important to remember that the presence of these analytes does not necessarily pose a health risk.

In the table you will find many terms and acronyms you might not be familiar with. To help you better understand these terms we have provided the following definitions: (*Analyte* – A substance being identified and measured in a chemical analysis.)

Important Drinking Water Terminology

mg/L	number of milligrams of substance in one liter of water
ppm	parts per million, or milligrams per liter (corresponds to one penny in \$10,000)
ppb	parts per billion, or micrograms per liter (corresponds to one penny in \$10,000,000)
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL	Maximum Contaminant Level: This highest level of a contaminant that is allowed in drinking water. MCLs are set as close as feasible using the best available treatment technology.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which water systems must follow.
MRDLG	Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL	Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
NTU	Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. It is monitored because it is a good indicator of water quality and assists in the effectiveness of the water filtration system.
NA	not applicable
ND	not detected
NR	monitoring not required, but recommended

Additional information for Lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Castle Rock is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or online at <http://water.epa.gov/drink/info/lead/index.cfm>.

Additional information for Arsenic: Your drinking water currently meets EPA's revised drinking water standard for arsenic. However, it does contain low levels of arsenic in the City of Castle Rock seasonal wells, which produces 18.7% of the total water production for the city. There is a small chance that some people who drink water containing low levels of arsenic for many years could develop circulatory disease, cancer, or other health problems. Most types of cancer and circulatory diseases are due to factors other than exposure to arsenic. EPA's standard balances the current understanding of arsenic's health effects against the costs of removing arsenic from drinking water.

Additional information for Fluoride: Fluoride is added to the drinking water to assist in dental hygiene. A level of .5 ppm - .9 ppm is necessary to be effective.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

We at the City of Castle Rock work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please call our office if you have questions. This notice has been provided to property owners and tenants supplied with potable water from the Castle Rock Distribution System. The City of Castle Rock is an equal opportunity provider.

2022 TEST RESULTS							
Analytes	Violation Yes/No	Level Detected	Unit Measure	MCLG	MCL	Likely Source of Contamination	Possible Health Effects
Turbidity	No	High .09 Avg. .03 <.3/100%	NTU	No Goal Listed	TT= 1 NTU TT= <.3/95%	Soil runoff	Turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms.
Fluoride	No	.2 – 1.0 Avg. .6	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
Nitrate (as Nitrogen)	No	1.07 – 2.40 Seasonal wells	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	Infants below the age of six months with exposure in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
TTHMs -Total Trihalomethanes	No	24.8 – 34.51 * 34.51	ppb	NA	80	Byproduct of drinking water chlorination	Exposure above the MCL over many years has the potential to cause liver, kidney or central nervous system problems and may increase the risk of cancer.
HAA5s - Haloacetic Acids	No	31 – 32 * 32	ppb	NA	60	Byproduct of drinking water disinfection	Exposure above the MCL over many years may increase the risk of cancer.
Lead	No	0 of 24 samples >.015 *.002 (90%)	ppm	.015	TT = AL AL is 10% >.015	Corrosion of household plumbing systems; Erosion of natural deposits	Infants and children with exposure in excess of the AL could have delays in physical or mental development. Adults with exposure above the MCL over many years could develop kidney problems or high blood pressure.
Copper	No	0 of 24 samples >1.3 in *.710 (90%)	ppm	1.3	TT = AL AL is 10% >1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	Exposure in excess of the AL over many years could suffer liver or kidney damage. People with Wilson's Disease should consult a doctor. Short term exposure can cause gastrointestinal distress
Arsenic	No	<1.0 *<1.0 Surface water	ppb	0	10	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Bromacil	No	ND	ppb	NA	NA	Used to control roadside vegetation	While there is not a MCL value, there is a "lifetime health advisory level" which is 70 ppb. The detected level is far below this advisory level.

*Highest average at any one location

As you can see by the table, our system had no violations. We are proud that your drinking water meets or exceeds all Federal and State requirements. In addition to the few detections we have reported here, we also monitored and conducted tests on more than 2,718 samples for more than 114 analytes and parameters in 2022, many of which had no detections. **The EPA has determined that your water IS SAFE at these levels.**

2023 RATES	CITY OF CASTLE ROCK'S WATER USE EFFICIENCY PLAN
WATER \$41.79 base fee + \$0.0547 per 1 cubic foot 1 cubic foot = 7.48 gallons	Goal: To reduce the city's water loss by 2% annually so that by 2028 the water loss is at 10% or less. To accomplish this goal, the City will take the following actions:
	Install new meter software to more efficiently track flows and leaks by 2019 (completed); and
	Continue to replace all water mains that were installed prior to 1970 to assist with reducing water loss due to leaks by 2028; and
	To continue to replace leaky service lines by 2022; and
	Conduct system wide leak audit by 2018 (completed) and then again in 2022 to track water loss.
SEWER \$36.06 base fee + \$0.0946 per 1 cubic foot 1 cubic foot = 7.48 gallons	2022 water loss was 12.2%
	Goal: To reduce the average consumption per capita by 1 gallon per day so that the average daily consumption per capita is 104 gallons by 2024 (completed). NEW Goal: Reduce to less than 100 gallons/day/capita. The City will take the following action to accomplish this goal:
	Provide education information to users by 2020; on-going; and
	Use water efficient flower baskets for all hanging flower baskets by 2019 (completed); and
	Develop education on rainwater reclamation program by 2022; and
	Develop and initiate a school outreach program on water conservation by 2023.

1. CALL TO ORDER

Mayor Paul Helenberg called the regular meeting of the Castle Rock City Council to order at 7:33 PM.

a. Pledge of Allegiance

Mayor Helenberg led the Pledge of Allegiance.

b. Roll Call

Councilmembers present: Art Lee, Earl Queen, and Paul Simonsen. Councilmember Lee Kessler was excused.

Staff present: Police Chief Charlie Worley, City Attorney Frank Randolph, Public Works Director Dave Vorse, City Engineer Tom Gower, City Planners Rachel Granrath and Malissa Paulsen, Clerk-Treasurer Carie Cuttonaro, and Deputy Clerk CeLina Hart.

c. Changes to Agenda

2. PROCLAMATIONS & PRESENTATIONS

3. CITIZEN COMMENTS - maximum 3 minutes

4. DEPARTMENT REPORTS

- City Attorney Frank Randolph

- Police Chief Charlie Worley

- Public Works Director Dave Vorse

Public Works Director Dave Vorse gave a verbal report.

CRCDA Representative Nancy Chennault provided comment.

Mayor Helenberg provided comment.

- City Engineer Tom Gower

City Engineer Tom Gower gave a verbal report.

Councilmember Paul Simonsen provided comment.

- Clerk-Treasurer Carie Cuttonaro

Clerk-Treasurer Carie Cuttonaro gave a verbal report.

1. Expenditure, Revenue, Cash & Investments Reports (page 3-7)

5. COUNCIL AND AD HOC COMMITTEE REPORTS

- Mayor / Mayor Pro-Tempore / Councilmembers

Mayor Helenberg gave a verbal report.

- CRCDA Representative

CRCDA Representative Nancy Chennault gave a verbal report.

6. PUBLIC HEARINGS

a. To consider Ordinance No. 2023-04 which established a six-month moratorium on the acceptance of applications for development activities or other permit applications for nonconforming lots in residential zones and declaring an emergency. (page 8-11)

Mayor Paul Helenberg closed the regular meeting and opened the Public Hearing at 7:42 PM.
City Planner Malissa Paulsen Presented.

Richard Skreen, City of Castle Rock Planning Commissioner, provided comment.

Todd Partridge provided comment.

Mayor Paul Helenberg closed the Public Hearing and opened the regular meeting at 7:45 PM.

7. CONSENT AGENDA

Councilmember Queen made a motion, seconded by Lee, to approve the Consent Agenda as presented. Motion carried by roll call vote. Councilmembers Lee, Queen, and Simonsen voted 'Aye'.

a. Approve the minutes of the April 10, 2023 Regular Council Meeting. (page 12-14)

8. OLD BUSINESS

9. NEW BUSINESS

10. OTHER BUSINESS

Police Chief Charlie Worley gave a verbal report.

11. ADJOURNMENT

There being no further business, Mayor Helenberg adjourned the meeting at 7:47 PM.

Mayor Paul Helenberg

Clerk-Treasurer Carie Cuttonaro

As of this date, 5/08/2023, the Council by a majority vote, does approve payment of the vouchers included in the Fund Transaction Summary Report, and further described as:

General Expenditures

<u>Transaction Type</u>	<u>Description</u>	<u>Amount</u>	<u>Payment Date</u>
Adjustment/EFT	EFT#995-4/2023	7,604.94	4/24/2023
Adjustment/EFT	EFT#996-4/2023	176.33	4/3/2023
Claims	Check 54234 - 54237	284.08	4/10/2023
Claims	Check 54238	229.97	4/14/2023
Claims	Check 54239	111.00	4/18/2023
Claims	Check 54240	248.97	4/20/2023
Claims	Check 54241	580.33	4/21/2023
Claims	Check 54242	206.78	4/27/2023
Claims	Check 54243	1,318.16	4/28/2023
Claims	Check 54244 - 54317	742,837.22	4/28/2023
		<u>753,597.78</u>	

Payroll Expenditures

<u>Transaction Type</u>	<u>Description</u>	<u>Amount</u>	<u>Payment Date</u>
Mid-Month Draw	Nacha # 948459	21,550.00	4/14/2023
Mid-Month Draw	Taxes	5,480.00	4/14/2023
EOM Payroll	Nacha # 960219	68,710.04	4/28/2023
EOM Payroll	Checks 26414 - 26433	62,871.83	4/28/2023
EOM Payroll	Taxes	28,805.48	4/28/2023
Uniform Allowance	Checks	-	
Uniform Allowance	Taxes	-	
Accrued - Quarterly Payroll Tax		6,039.71	
		<u>193,457.06</u>	

TBD Expenditures

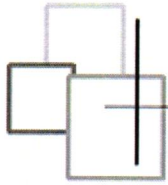
<u>Transaction Type</u>	<u>Description</u>	<u>Amount</u>	<u>Payment Date</u>
Adjustment/EFT	EFT#	-	
Adjustment/EFT	EFT#	-	
Claims	Check	-	
Claims	Check	-	
		<u>-</u>	

	<u>Amount</u>	<u>Payment Date</u>
Grand Total Expenditures	947,054.84	4/1/2023 - 4/30/2023
Fund Transaction Summary Report	947,054.84	
Balance Check (s/b -0-)	-	

Lee Kessler, Audit Committee Member

Art Lee, Audit Committee Member

Ellen Rose, Audit Committee Member



Fund Transaction Summary

Transaction Type: Invoice
Fiscal: 2023 - Apr - May - City Council
System Types: Cash Management, Financials, Payroll, Resources, UB2, Utility Billing

Fund Number	Description	Amount
010	General Fund	\$154,253.39
100	Street Fund	\$29,350.29
115	Building Code Account Fund	\$4,391.05
120	Visitor Center Fund	\$325.99
130	Library Fund	\$459.75
140	Criminal Justice Fund	\$142.50
145	Local Criminal Justice Fund	\$7,949.06
170	DOT Spoil Site Fund	\$5,977.81
185	Police Vehicle Replacement Fund	\$4,916.27
400	Water/Sewer Operating Fund	\$173,677.25
410	Regional Water System Fund	\$43,956.72
420	Stormwater Management Fund	\$13,729.01
430	Regional Water Capital Improvement	\$115.50
435	Muni Water Capital Improvement	\$470,372.07
470	Muni Sewer Capital Imprv Reserve	\$18,519.39
475	Boat Launch Facility Fund	\$18,590.21
631	Utility Deposit Fund	\$32.36
634	State Custodial Pass-Thru Fund	\$296.22
	Count: 18	\$947,054.84

ORDINANCE NO. 2023-05

AN ORDINANCE OF THE CITY OF CASTLE ROCK RELATING TO FLOOD DAMAGE PREVENTION; AMENDING
CHAPTER 15.24 OF THE CASTLE ROCK MUNICIPAL CODE.

WHEREAS, cities in Washington are required to maintain regulations addressing development in frequently-flooded areas including floodplains as designated by the National Flood Insurance Program and other areas subject to flooding that perform important hydrologic functions and may present a risk to people and property; and

WHEREAS, regulations addressing frequently flooded areas are required to be updated on a periodic basis for compliance with current Federal, State, and Local flood hazard area standards to retain participation in the National Flood Insurance Program; and

WHEREAS, the City Planner initiated an application for the update to the Flood Damage Prevention Code, Title 15, on March 21, 2023; and

WHEREAS, proposed updates to the Flood Damage Prevention Code were referred to and a public meeting was held by the Planning Commission on April 18, 2023; and

WHEREAS, the Planning Commission, after review and consideration of public and agency comment and testimony, staff reports, and other relevant information, recommended that the City Council adopt the proposed updates to the Flood Damage Prevention Code as submitted to the Commission; and

WHEREAS, the City Planner submitted the Flood Damage Prevention Code section to the Department of Commerce for a an expedited review and compliance with the Growth Management Act and Notice of Intent to Adopt on April 7, 2023 and received no agency comments or requests for revision; and

WHEREAS, the ordinance was read for the first time and adopted by unanimous vote of the City Council on May 8, 2023.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF CASTLE ROCK, WASHINGTON, DOES ORDAIN AS FOLLOWS:

The facts stated in the above recitals are true; and

This ordinance complies with all procedural requirements for nonemergency ordinances in accordance with the Castle Rock Municipal Code Title 2; and

Chapter 15.24 of the Castle Rock Municipal Code is amended to read as follows (deletions are denoted by ~~strikeout~~; additions are denoted by underline; remaining text is unchanged; ellipses [...] are used for brevity when no changes are made in existing code sections):

...

15.24.030 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

A. To protect human life and health;

- B. To minimize expenditure of public money and costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;
- F. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.
- I. To participate in and maintain eligibility for flood insurance and disaster relief.

...

15.24.050 Definitions.

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

“AO Zones” or “Shallow Flooding Areas” means an area that appears on FIRMS as AO Zones with depth designations. The base flood depths in these zones range from 1 to 3 feet above ground 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. Further provisions for AO Zones are laid out in CRMC 15.24.270 for residential structures, and CRMC 15.24.280 for nonresidential structures.

“Alteration of watercourse” means any action that will change the location of the channel occupied by water within the banks of any portion of a riverine waterbody.

“Appeal” means a request for a review of the ~~building inspector’s~~ building official or their designee’s interpretation of any provision of this chapter or a request for a variance.

“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.

“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. Designation on the FIRM always includes the letter A. “Special flood hazard area” is synonymous in meaning with the phrase “area of special flood hazard”.

“ASCE 24” means the most recently published version of ASCE 24, Flood Resistant Design and Construction, published by the American Society of Civil Engineers.

“Base flood” means the flood having a 1% chance of being equaled or exceeded in any given year (also referred to as the “100-year flood”).

“Base Flood Elevation (BFE)” means the elevation to which floodwater is anticipated to rise during the base flood.

“Basement” means any area of the building having its floor sub-grade (below ground level) on all sides.

“Building” is synonymous with "Structure."

“Building Code” means the currently effective versions of the International Building Code and the International Residential Code adopted by the State of Washington and City of Castle Rock.

“Critical facility” means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, and installations which produce, use or store hazardous materials or hazardous waste.

“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 located within the area of special flood hazard.

“Elevation Certificate” means an administrative tool of the National Flood Insurance Program (NFIP) that can be used to provide elevation information, to determine the proper insurance premium rate, and to support a request for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-F).

“Elevated Building” means for insurance purposes, a non-basement building that has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

“Essential Facility” means this term has the same meaning as “Essential Facility” defined in ASCE 24. Table 1-1 in ASCE 24-14 further identifies building occupancies that are essential facilities.

“FEMA” means the Federal Emergency Management Agency

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

1. A general and temporary condition of partial or complete inundation of normally dry land areas from:
 - a. The overflow of inland or tidal waters.
 - b. The unusual and rapid accumulation or runoff of surface waters from any source.
 - c. Mudslides (i.e. mudflows) which are proximately caused by flooding as defined in paragraph (1)(b) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.
2. The unusual and rapid accumulation or runoff of surface waters from any source. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water,

accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (1)(a) of this definition.

"Flood elevation study" means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards. Also known as a Flood Insurance Study (FIS).

"Flood Insurance Rate Map (FIRM)" means the official map on which the Federal Emergency Management Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

"Floodplain or flood prone area" means any land area susceptible to being inundated by water from any source. See "Flood or flooding."

"Floodplain administrator" means the community official designated by title to administer and enforce the floodplain management regulations.

"Flood Insurance Study" means the official report provided by the Federal Emergency Management Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.

"Flood proofing" means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents. Flood proofed structures are those that have the structural integrity and design to be impervious to floodwater below the Base Flood Elevation.

"Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one-foot a designated height. Also referred to as "Regulatory Floodway."

"Functionally dependent use" means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long term storage or related manufacturing facilities.

"Highest adjacent grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

"Historic structure" means any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. 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;
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or

4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:

a. By an approved state program as determined by the Secretary of the Interior, or

b. Directly by the Secretary of the Interior in states without approved programs.

"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 chapter found at CRMC 15.24.270(B).

~~"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 180 consecutive days. For insurance purposes, the term "manufactured home" does not include park trailers, travel trailers and other similar vehicles~~ a single-family residence constructed after June 15, 1976, in accordance with state and federal requirements for manufactured homes which:

A. Is comprised of at least two fully enclosed parallel sections each of not less than 12 feet wide by 36 feet long;

B. Was originally constructed with and now has a composition or wood shake or shingle, coated metal, or similar roof of nominal 3:12 pitch, and

C. Has exterior siding similar in appearance to siding materials commonly used on conventional site-built Uniform Building Code single-family residences.

~~"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~~ a plot of ground divided into lots or sites under the ownership and/or management of one person for the purpose of locating manufactured homes for dwelling purposes.

"Mean Sea Level" means for purposes of the National Flood Insurance Program, the vertical datum to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

"New construction" means structures for which the start of construction commenced on or after the effective date of the ordinance codified in this chapter.

"One-hundred-year flood or 100 year flood" is synonymous with "Base flood."

"Reasonably Safe from Flooding" means development that is designed and built to be safe from flooding based on consideration of current flood elevation studies, historical data, high water marks and other reliable data known to the community. In unnumbered A zones where flood elevation information is not available and cannot be obtained by practicable means, reasonably safe from flooding means that the lowest floor is at least two feet above the Highest Adjacent Grade.

"Recreational Vehicle" a vehicle that is:

1. Built on a single chassis;

2. 400 square feet or less when measured at the largest horizontal projection;

3. Designed to be self-propelled or permanently towable by a light duty truck; and

4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

“Start of construction” includes substantial improvement, and means the date the building permit was issued; provided the actual start of construction, repair, reconstruction, 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 foundation 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.

“Structure” means a walled and roofed building including a gas or liquid storage tank that is principally aboveground that which is built or constructed, an edifice or building or structure, such as foundations, bearing walls, columns, beams, floor or floor joists, girders or rafters, or changes in the exterior dimensions of the building or structure, or increase in floor space. A “structure” for floodplain management purposes also means a walled and roofed building including a gas or liquid storage tank that is principally aboveground, as well as a manufactured home.

“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 Improvement.

1. “Substantial improvement” means any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

- a. Before the improvement or repair is started; or
- b. If the structure has been damaged and is being restored, before the damage occurred. For the purposes 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.

2. The term does not, however, include either:

- a. Any project for improvement of a structure to comply with existing state or local health, sanitary or safety code specifications which are solely necessary to assure safe living conditions; or
- b. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

“Water surface elevation” means the height, in relation to the vertical datum utilized in the applicable flood insurance study of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

“Variance” means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter. Criteria for a floodplain variance is outlined in Section 15.24.170.

“Water dependent” means a structure for commerce or industry which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations.

...

15.24.075 Compliance

All development within special flood hazard areas is subject to the terms of this ordinance and other applicable regulations.

...

15.24.115 Severability

This ordinance and the various parts thereof are hereby declared to be severable. Should any Section of this ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the ordinance as a whole, or any portion thereof other than the Section so declared to be unconstitutional or invalid.

...

15.24.140 Application for development permit.

Application for a development permit shall be made on forms furnished by the building ~~inspector~~ official or their designee and may include but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities and the location of the foregoing. Specifically, the following information is required:

- A. Elevation in relation to mean sea level of the lowest floor (including basement) of all structures;
- B. Elevation in relation to mean sea level to which any structure has been floodproofed;
- C. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in CRMC 15.24.280; and
- D. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.
- E. Where development is proposed in a floodway, an engineering analysis indication no rise of the Base Flood Elevation, and
- F. Any other such information that may be reasonably required by the Floodplain Administrator in order to review the application.

15.24.150 Building ~~inspector~~ Official designated as administrator.

The building ~~inspector~~ official or their designee is appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions.

15.24.160 Duties and responsibilities of the building ~~inspector~~ official.

Duties of the building ~~inspector~~ official or their designee shall include, but not be limited to:

- A. Permit Review.

1. Review all development permits to determine that the permit requirements of this chapter have been satisfied.
2. Review all development permits 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 development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the provisions of CRMC 15.24.310 are met.
4. The site is reasonably safe from flooding;
5. Notify FEMA when annexations occur in the Special Flood Hazard Area.

B. Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with CRMC 15.24.070, the building inspector official or their designee 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 CRMC 15.24.260 through 15.24.310.

C. Information to Be Obtained and Maintained.

1. Where 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 (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.
2. Certification required by Section CRMC 15.24.31 Floodways. (44 CFR 60.3(d)(3))
3. Records of all variance actions, including justification for their issuance. (44 CFR 60.6(a)(6))
4. Improvement and damage calculations.
5. For all new or substantially improved floodproofed structures:
 - a. Verify and record the actual elevation (in relation to mean sea level); and
 - b. Maintain the floodproofing certifications required in CRMC 15.24.140(C).
6. Maintain for public inspection all records pertaining to the provisions of this chapter.

D. Alteration of Watercourses.

1. Notify adjacent communities and the Washington State Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.
2. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

E. Interpretation of FIRM Boundaries. Make interpretations, where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in CRMC 15.24.170 through 15.24.190.

F. The Floodplain Administrator shall maintain a record of all variance actions, including justification for their issuance.

15.24.170 Variance procedure – Generally.

The variance procedure is as set out in CRMC 15.24.180 and 15.24.190.

A. In considering variance applications, the City of Castle Rock shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and:

1. The danger that materials may be swept onto other lands 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;
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 time of flood for ordinary and emergency vehicles;
10. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site; and,
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 system, and streets and bridges.

15.24.180 Appeal board.

A. The city council shall hear and decide appeals and requests for variances from the requirements of this chapter.

B. The city council shall hear and decide appeals when it is alleged there is an error in any requirement, decision or determination made by the building ~~inspector~~ official or their designee in the enforcement or administration of this chapter.

C. Those aggrieved by the decision of the city council, or any taxpayer, may appeal such decision to the Cowlitz County superior court, as provided in RCW Title 34.

D. In passing upon such applications, the city council shall consider all technical evaluations, all relevant factors and standards specified in other sections of this chapter, and:

1. The danger that materials may be swept onto other lands 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;

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 and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
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 and water systems, and streets and bridges.

E. Upon consideration of the factors of subsection (D) of this section and the purposes of this chapter, the city council may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

F. The building ~~inspector~~ official or their designee shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Administration upon request.

15.24.190 Conditions for variances.

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, providing CRMC 15.24.180(D)(1) through (11) 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 structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in this section.

C. Variances shall not be issued within a 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 CRMC 15.24.180(D), or conflict with existing local laws or ordinances.

4. Upon a showing that the use cannot perform its intended purpose unless it is located or carried out in close proximity to water. This includes only facilities defined in CRMC 15.24.050 of this ordinance in the definition of “Functionally Dependent Use.”

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 those set out in subsection (A) of this section, and otherwise complies with CRMC 15.24.210 and 15.24.220.

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 floor elevation, and that such construction below the base flood elevation increases risks to life and property.~~

15.24.200 General standards.

A. In all areas of special flood hazards, the following standards set out in CRMC 15.24.210 through 15.24.330 250 are required.

B. General Requirements for development in all areas of special flood hazards not set out in CRMC 15.24.210 through 15.24.330 250, are below:

1. All development, including manmade changes to improved or unimproved real estate for which specific provisions are not specified in this ordinance or the state building codes with adopted amendments and any City of Castle Rock amendments, shall:

a. Be located and constructed to minimize flood damage;

b. Meet the encroachment limitations of this ordinance if located in a regulatory floodway;

c. Be anchored to prevent flotation, collapse, or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood;

d. Be constructed of flood damage-resistant materials;

e. Meet the flood opening requirements of Section 5.2-1(5), and

f. Have mechanical, plumbing, and electrical systems above the design flood elevation or meet the requirements of ASCE 24, except that minimum electric service required to address life safety and electric code requirements is permitted below the design flood elevation provided it conforms to the provisions of the electrical part of building code for wet locations.

...

15.24.230 Utilities.

- A. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
- B. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters.
- C. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- D. Water wells shall be located on high ground that is not in the floodway.

...

15.24.270 Residential construction.

A. In A Zones where BFE has been determined or can be reasonably obtained New new construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above base flood elevation. Mechanical equipment and utilities shall be waterproof or elevated at least one foot above the BFE.

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 floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

1. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
2. The bottom of all openings shall be no higher than one foot above grade.
3. Openings may be equipped with screens, louvers or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters. [Ord. 88-14 § 5.2-1, 1988].
4. A garage attached to a residential structure, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry and exit of flood waters.

C. New construction and substantial improvement of any residential structure in an Unnumbered A zone for which a BFE is not available and cannot be reasonably obtained shall be reasonably safe from flooding, but in all cases the lowest floor shall be at least two feet above the Highest Adjacent Grade.

15.24.280 Nonresidential construction.

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 level of the base flood elevation or elevated as required by ASCE 24, whichever is greater; or, together with attendant utility and sanitary facilities, shall:

- A. Be floodproofed so that below one foot 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;
- 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

section based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in CRMC 15.24.160(C)(2);

D. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in CRMC 15.24.270(B);

E. 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 floodproofed to one foot above the base flood level will be rated as at the base flood level).

...

15.24.300 Manufactured homes.

All manufactured homes to be placed or substantially improved ~~within zones AH and AE on the community's FIRM~~ shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is one foot or more above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the provisions of CRMC 15.24.210(B). This section applies to manufactured homes to be placed or substantially improved in an expansion to an existing manufactured home park or subdivision. ~~This section does not apply to manufactured homes to be placed or substantially improved in an existing manufactured home park or subdivision except where the repair, reconstruction or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced.~~

15.24.305 Recreational vehicles.

Recreational vehicles placed on sites are required to either:

1. Be on the site for fewer than 90 consecutive days, or
2. Be fully licensed and ready for highway use, on wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or
3. Meet the requirements of CRMC 15.24.300 above.

15.24.307 Enclosed Area below the lowest floor.

If buildings or manufactured homes are constructed or substantially improved with fully enclosed areas below the lowest floor, the areas shall be used solely for parking of vehicles, building access, or storage.

15.24.309 AE and A1-30 zones with base flood elevation but no floodway.

In areas with BFEs (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.

15.24.310 Floodways.

Located within areas of special flood hazard established in CRMC 15.24.070 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters 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 ~~or architect~~ is provided demonstrating that 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: (1) repairs, reconstruction or improvements to a structure which do not increase the ground floor area; and (2) repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either (a) before the repair, reconstruction or repair is started, or (b) if the structure has been damaged, and is being restored, before the damage occurred. Work done on structures to comply with existing health, sanitary or safety codes or to structures identified as historic places shall not be included in the 50 percent determination.

C. If subsection (A) of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this article.

...

15.24.330 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 1 to 3 feet above ground 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 addition to other provisions in this code, the following additional provisions also apply in AO zones:

1. New construction and substantial improvements of residential structures and manufactured homes within AO zones shall have the lowest floor (including basement and mechanical equipment) elevated above the highest adjacent grade to the structure, one foot or more above* the depth number specified in feet on the community's FIRM (at least two feet above the highest adjacent grade to the structure if no depth number is specified).

2. New construction and substantial improvements of nonresidential structures within AO zones shall either:

a. 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 FIRM (at least two feet if no depth number is specified); or

b. Together with attendant utility and sanitary facilities, be completely flood proofed 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 as in section 5.2-2(3).

3. Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

4. Recreational vehicles placed on sites within AO zones on the community's FIRM either:

- a. Be on the site for fewer than 180 consecutive days, or
- b. Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
- c. Meet the requirements of subsections (1) and (3) above and the anchoring requirements for manufactured homes CRMC 15.24.300, above.

PASSED by the City Council and signed by the Mayor on this ____ day of _____, 2023.

Mayor Paul Helenberg

Attest:

Approved as to form:

Clerk-Treasurer

City Attorney

Chapter 15.24

FLOOD DAMAGE PREVENTION

Sections:

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Article II. Definitions

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Article IV. Administration

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- [15.24.200 General standards.](#)
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- [15.24.220 Construction materials and methods.](#)
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- [15.24.240 Subdivision proposals.](#)
- [15.24.250 Review of building permits.](#)
- [15.24.260 Specific standards.](#)

Commented [KA1]: Dave Johnson - Believes the Building Official should be the designated administrator, but he would also like to know who the floodplain administrator would be if we did not have a building official anymore. A Building Official typically has an elevated skill set that could allow them to be an administrator vs Building Inspector, as the Building Official oversees the Inspector, though if they had FEMA training it may work. Should we have someone trained and certified by FEMA?

Commented [LP2R1]: We can change it to the building official. My recommendation is to change it to "Building Official or designee", this leaves it open to having someone else who can handle it if the building official is out.

Commented [LP3R1]:
<https://www.fema.gov/about/organization/region-2/floodplain-management-training>
Some free training videos from FEMA for Floodplain Management Training

Commented [LP4R1]:
https://www.fema.gov/sites/default/files/documents/fema-480_floodplain-management-study-guide_local-officials.pdf

[15.24.270 Residential construction.](#)
[15.24.280 Nonresidential construction.](#)
[15.24.290 Critical facility.](#)
[15.24.300 Manufactured homes.](#)
[15.24.310 Floodways.](#)
[15.24.320 Wetlands management.](#)

Article I. Statutory Authorization, Findings of Fact, Purpose and Objectives

15.24.010 Statutory authorization.

The Legislature of the state of Washington has delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety and general welfare of its citizenry. [Ord. 88-14 § 1.1, 1988].

15.24.020 Findings of fact.

A. The flood hazard areas of Castle Rock 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. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss. [Ord. 88-14 § 1.2, 1988].

15.24.030 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

- A. To protect human life and health;
- B. To minimize expenditure of public money and costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;

F. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;

G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and

H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

I. To participate in and maintain eligibility for flood insurance and disaster relief. [Ord. 88-14 § 1.3, 1988].

15.24.040 Methods of reducing flood losses.

In order to accomplish its purposes, this chapter 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, 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 floodwaters;

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

E. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or may increase flood hazards in other areas. [Ord. 88-14 § 1.4, 1988].

Article II. Definitions

15.24.050 Definitions.

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

"AO Zones" or "Shallow Flooding Areas" means an area that appears on FIRMS as AO Zones with depth designations. The base flood depths in these zones range from 1 to 3 feet above ground 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. Further provisions for AO Zones are laid out in CRMC 15.24.270 for residential structures, and CRMC 15.24.280 for nonresidential structures.

"Alteration of watercourse" means any action that will change the location of the channel occupied by water within the banks of any portion of a riverine waterbody

Commented [LP5]: Optional

Commented [LP6R5]: Add

"Appeal" means a request for a review of the ~~building inspector~~building official or their designee's interpretation of any provision of this chapter or a request for a variance.

Commented [KA7]: David Johnson - This should be Building Official's interpretation

"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.

"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. Designation on the FIRM always includes the letter A.
"Special flood hazard area" is synonymous in meaning with the phrase "area of special flood hazard".

"ASCE 24" means the most recently published version of ASCE 24, Flood Resistant Design and Construction, published by the American Society of Civil Engineers.

Commented [LP8]: Optional

Commented [LP9R8]: Add

"Base flood" means the flood having a 1% chance of being equaled or exceeded in any given year (also referred to as the "100-year flood").

"Base Flood Elevation (BFE)" means the elevation to which floodwater is anticipated to rise during the base flood.

"Basement" means any area of the building having its floor sub-grade (below ground level) on all sides.

"Building" is synonymous with "Structure."

"Building Code" means the currently effective versions of the International Building Code and the International Residential Code adopted by the State of Washington and City of Castle Rock.

Commented [KA10]: David Johnson - believes this should say: State of Washington and City of Castle Rock - he stated the Code Council recommends items to the state but does not govern them.

"Critical facility" means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, and installations which produce, use or store hazardous materials or hazardous waste.

"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 located within the area of special flood hazard.

"Elevation Certificate" means an administrative tool of the National Flood Insurance Program (NFIP) that can be used to provide elevation information, to determine the proper insurance premium rate, and to support a request for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-F).

"Elevated Building" means for insurance purposes, a non-basement building that has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

"Essential Facility" means this term has the same meaning as "Essential Facility" defined in ASCE 24. Table 1-1 in ASCE 24-14 further identifies building occupancies that are essential facilities.

Commented [LP11]: Optional

Commented [LP12R11]: Add

"FEMA" means the Federal Emergency Management Agency

Commented [KA13]: David Johnson believes the meaning of FEMA should appear in this list of definitions.

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

1. A general and temporary condition of partial or complete inundation of normally dry land areas from:
 - a. The overflow of inland or tidal waters.
 - b. The unusual and rapid accumulation or runoff of surface waters from any source.
 - c. Mudslides (i.e. mudflows) which are proximately caused by flooding as defined in paragraph (1)(b) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.
- 4.—The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (1)(a) of this definition.
2. —

"Flood elevation study" means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards. Also known as a Flood Insurance Study (FIS).~~1. The overflow of inland waters; and/or~~

- ~~2. The unusual and rapid accumulation of runoff of surface waters from any source.~~

"Flood Insurance Rate Map (FIRM)" means the official map on which the Federal Emergency Management Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

"Floodplain or flood prone area" means any land area susceptible to being inundated by water from any source. See "Flood or flooding."

"Floodplain administrator" means the community official designated by title to administer and enforce the floodplain management regulations. "Flood Insurance Study" means the official report provided by the Federal Emergency Management Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.

"Flood proofing" means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents. Flood proofed structures are those that have the structural integrity and design to be impervious to floodwater below the Base Flood Elevation.

"Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Also referred to as "Regulatory Floodway." ~~-one foot-~~

"Functionally dependent use" means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long term storage or related manufacturing facilities.

"Highest adjacent grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

"Historic structure" means any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. 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;
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - a. By an approved state program as determined by the Secretary of the Interior, or
 - a.b. Directly by the Secretary of the Interior in states without approved programs.

"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 chapter found at CRMC 15.24.270(B).

"Manufactured home" means a single-family residence constructed after June 15, 1976, in accordance with state and federal requirements for manufactured homes which:

Commented [LP14]: Updated to reflect definition in CRMC 17.16.480

Commented [LP15R14]: Add

A. Is comprised of at least two fully enclosed parallel sections each of not less than 12 feet wide by 36 feet long;

B. Was originally constructed with and now has a composition or wood shake or shingle, coated metal, or similar roof of nominal 3:12 pitch, and

A.C. Has exterior siding similar in appearance to siding materials commonly used on conventional site-built Uniform Building Code single-family residences. -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 180 consecutive days. For insurance purposes, the term "manufactured home" does not include park trailers, travel trailers and other similar vehicles.

"Manufactured home park or subdivision" means a plot of ground divided into lots or sites under the ownership and/or management of one person for the purpose of locating manufactured homes for dwelling purposes.

Commented [KA16]: Should this be purposes?

"Mean Sea Level" means, for purposes of the National Flood Insurance Program, the vertical datum to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced, a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Commented [LP17]: Updated to reflect definition in CRMC 17.16.481
Difference is "Mobile home park or subdivision" vs "Mobile home park", should choose one and change other.

"New construction" means structures for which the start of construction commenced on or after the effective date of the ordinance codified in this chapter.

Commented [LP18R17]: Kelso Code

"One-hundred-year flood or 100 year flood" is synonymous with "Base flood."

"Reasonably Safe from Flooding" means development that is designed and built to be safe from flooding based on consideration of current flood elevation studies, historical data, high water marks and other reliable data known to the community. In unnumbered A zones where flood elevation information is not available and cannot be obtained by practicable means, reasonably safe from flooding means that the lowest floor is at least two feet above the Highest Adjacent Grade.

"Recreational Vehicle" a vehicle that is:

1. Built on a single chassis;
2. 400 square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

"Start of construction" includes substantial improvement, and means the date the building permit was issued; provided the actual start of construction, repair, reconstruction, 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 foundation 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.

"Structure" means that which is built or constructed, an edifice or building or structure, such as foundations, bearing walls, columns, beams, floor or floor joists, girders or rafters, or changes in the exterior dimensions of the building or structure, or increase in floor space. A "structure" for floodplain management purposes also means a walled and roofed building including a gas or liquid storage tank that is principally aboveground, as well as a manufactured home.

"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, a walled and roofed building including a gas or liquid storage tank that is principally aboveground.

Substantial Improvement.

1. "Substantial improvement" means any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

- a. Before the improvement or repair is started; or
- b. If the structure has been damaged and is being restored, before the damage occurred. For the purposes 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.

2. The term does not, however, include either:

- a. Any project for improvement of a structure to comply with existing state or local health, sanitary or safety code specifications which are solely necessary to assure safe living conditions; or
- b. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

"Water surface elevation" means the height, in relation to the vertical datum utilized in the applicable flood insurance study of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

"Variance" means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter. Criteria for a floodplain variance is outlined in Section 15.24.170.

Commented [LP19]: Updated to reflect definition in CRMC 17.16.705

Commented [LP20]: Do we want to update to reflect CRMC 17.16.745 Variance. : A "variance" is the means by which an adjustment is made in the application of the specific regulations of a zoning ordinance to a particular piece of property because of special circumstances applicable to it, and to which the property is deprived of privileges commonly enjoyed by other properties in the same vicinity and zone and which adjustment remedies disparity in privileges.

Commented [LP21R20]: Keep same, clarified by other regulations.

Commented [LP22R20]: Added reference to criteria per RG comment

“Water dependent” means a structure for commerce or industry which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations. [Ord. 2015-12 § 1, 2015; Ord. 88-14 § 2.0, 1988].

Article III. General Provisions

15.24.060 Lands to which this chapter applies.

This chapter shall apply to all areas of special flood hazards within the jurisdiction of Castle Rock. [Ord. 88-14 § 3.1, 1988].

15.24.070 Basis for establishing the areas of special flood hazard.

Frequently flooded areas may include lands outside of the Federal Emergency Management Agency-defined floodplains and shall include areas identified on the Flood Insurance Rate Maps. Those areas of special flood hazard identified by the Federal Emergency Management Administration are identified in a scientific and engineering report entitled Flood Insurance Study No. 53015CV001A – Cowlitz County, Washington and Incorporated Areas, Vols. 1 – 3, December 16, 2015, with accompanying Flood Insurance Rate Maps and any revisions thereto. The Flood Insurance Study and accompanying maps are hereby adopted by reference, declared to be a part of this chapter, and are available for public review in the city clerk-treasurer's office, City Hall, 141 A Street SW, Castle Rock, Washington. [Ord. 2015-12 § 1, 2015; Ord. 2001-11, 2001; Ord. 93-6, 1993; Ord. 88-14 § 3.2, 1988].

15.24.075 Compliance

All development within special flood hazard areas is subject to the terms of this ordinance and other applicable regulations.

15.24.080 Penalties for noncompliance.

No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this chapter and other applicable regulations. Violation of the provisions of this chapter by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this chapter or fails to comply with any of its requirements shall upon conviction thereof be fined not more than \$500.00 or imprisoned for not more than 180 days, or both, for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent Castle Rock from taking such other lawful action as is necessary to prevent or remedy any violation. [Ord. 88-14 § 3.3, 1988].

15.24.090 Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this chapter and another ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. [Ord. 88-14 § 3.4, 1988].

15.24.100 Interpretation.

In the interpretation and application of this chapter, 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. 88-14 § 3.5, 1988].

15.24.110 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 chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of Castle Rock, any officer or employee thereof, or the Federal Emergency Management Administration, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder. [Ord. 2015-12 § 1, 2015; Ord. 88-14 § 3.6, 1988].

15.24.115 Severability

This ordinance and the various parts thereof are hereby declared to be severable. Should any Section of this ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the ordinance as a whole, or any portion thereof other than the Section so declared to be unconstitutional or invalid.

Article IV. Administration

15.24.120 Establishment of development permit.

Development permits are established as set out in CRMC [15.24.130](#) and [15.24.140](#). [Ord. 88-14 § 4.1, 1988].

15.24.130 Development permit – Required.

A development permit shall be obtained before construction or development begins within any area of special flood hazard established in CRMC [15.24.070](#). The permit shall be for all structures including manufactured homes, as set forth in Article II of this chapter, and for all development including fill and other activities, also as set forth in Article II of this chapter. [Ord. 88-14 § 4.1-1, 1988].

15.24.140 Application for development permit.

Application for a development permit shall be made on forms furnished by the building ~~inspector-official or their designee~~ and may include but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities and the location of the foregoing. Specifically, the following information is required:

- A. Elevation in relation to mean sea level of the lowest floor (including basement) of all structures;
- B. Elevation in relation to mean sea level to which any structure has been floodproofed;
- C. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in CRMC [15.24.280](#); and
- D. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.
- E. Where development is proposed in a floodway, an engineering analysis indication no rise of the Base Flood Elevation, and
- F. Any other such information that may be reasonably required by the Floodplain Administrator in order to review the application.

[Ord. 88-14 § 4.1-2, 1988].

15.24.150 Building ~~inspector~~ Official designated as administrator.

The building ~~inspector-official or their designee~~ is appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions. [Ord. 88-14 § 4.2, 1988].

15.24.160 Duties and responsibilities of the building ~~inspector~~official.

Duties of the building ~~inspector-official or their designee~~ shall include, but not be limited to:

A. Permit Review.

1. Review all development permits to determine that the permit requirements of this chapter have been satisfied.
2. Review all development permits 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 development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the provisions of CRMC [15.24.310](#) are met.

Commented [KA23]: David Johnson - this should state Building Official as designated administrator.

Commented [LP24R23]: We can have Planning staff be the backup if the Official or designee is not available. It would naturally fall to Planning in their absence as it's a development permit anyhow.

4. The site is reasonably safe from flooding:

5. Notify FEMA when annexations occur in the Special Flood Hazard Area.

B. Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with CRMC [15.24.070](#), the building ~~inspector~~official or their designee 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 CRMC [15.24.260](#) through [15.24.310](#).

C. Information to Be Obtained and Maintained.

1. Where 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 (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.

2. Certification required by Section CRMC 15.24.31 Floodways. (44 CFR 60.3(d)(3))

3. Records of all variance actions, including justification for their issuance. (44 CFR 60.6(a)(6))

4. Improvement and damage calculations.

52. For all new or substantially improved floodproofed structures:

- a. Verify and record the actual elevation (in relation to mean sea level); and
- b. Maintain the floodproofing certifications required in CRMC [15.24.140](#)(C).

63. Maintain for public inspection all records pertaining to the provisions of this chapter.

D. Alteration of Watercourses.

1. Notify adjacent communities and the Washington State Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.

2. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

E. Interpretation of FIRM Boundaries. Make interpretations, where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in CRMC [15.24.170](#) through [15.24.190](#). ~~[Ord. 88-14 § 4.3, 1988].~~

F. The Floodplain Administrator shall maintain a record of all variance actions, including justification for their issuance. [Ord. 88-14 § 4.3, 1988].

15.24.170 Variance procedure – Generally.

The variance procedure is as set out in CRMC [15.24.180](#) and [15.24.190](#).

A. In considering variance applications, the City of Castle Rock shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and:

1. The danger that materials may be swept onto other lands 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;
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 time of flood for ordinary and emergency vehicles;
10. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site; and,
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 system, and streets and bridges.

[Ord. 88-14 § 4.4, 1988].

15.24.180 Appeal board.

A. The city council shall hear and decide appeals and requests for variances from the requirements of this chapter.

B. The city council shall hear and decide appeals when it is alleged there is an error in any requirement, decision or determination made by the building ~~inspector~~official or their designee in the enforcement or administration of this chapter.

C. Those aggrieved by the decision of the city council, or any taxpayer, may appeal such decision to the Cowlitz County superior court, as provided in RCW Title [34](#).

D. In passing upon such applications, the city council shall consider all technical evaluations, all relevant factors and standards specified in other sections of this chapter, and:

1. The danger that materials may be swept onto other lands 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;
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 and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
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 and water systems, and streets and bridges.

E. Upon consideration of the factors of subsection (D) of this section and the purposes of this chapter, the city council may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

F. The ~~building inspector~~building official or their designee shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Administration upon request. [Ord. 2015-12 § 1, 2015; Ord. 88-14 § 4.4-1, 1988].

15.24.190 Conditions for variances.

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, providing CRMC [15.24.180](#)(D)(1) through (11) 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 structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in this section.

C. Variances shall not be issued within a 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 CRMC [15.24.180](#)(D), or conflict with existing local laws or ordinances.

4. Upon a showing that the use cannot perform its intended purpose unless it is located or carried out in close proximity to water. This includes only facilities defined in CRMC 15.24.050 of this ordinance in the definition of "Functionally Dependent Use."

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 those set out in subsection (A) of this section, and otherwise complies with CRMC [15.24.210](#) and [15.24.220](#).

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 floor elevation, ~~and that such construction below the base flood elevation increases risks to life and property.~~ [Ord. 88-14 § 4.4-2, 1988].

Article V. Provisions for Flood Hazard Reduction

15.24.200 General standards.

A. In all areas of special flood hazards, the following standards set out in CRMC ~~15.24.210~~ through ~~15.24.330 250~~ are required.

~~B. General Requirements for development in all areas of special flood hazards not set out in CRMC 15.24.210 through 15.24.250, are below:~~

~~1. All development, including manmade changes to improved or unimproved real estate for which specific provisions are not specified in this ordinance or the state building codes with adopted amendments and any City of Castle Rock amendments, shall:~~

- ~~a. Be located and constructed to minimize flood damage;~~
- ~~b. Meet the encroachment limitations of this ordinance if located in a regulatory floodway;~~
- ~~c. Be anchored to prevent flotation, collapse, or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood;~~
- ~~d. Be constructed of flood damage-resistant materials;~~
- ~~e. Meet the flood opening requirements of Section 5.2-1(5), and~~
- ~~a.f. Have mechanical, plumbing, and electrical systems above the design flood elevation or meet the requirements of ASCE 24, except that minimum electric service required to address life safety and electric code requirements is permitted below the design flood elevation provided it conforms to the provisions of the electrical part of building code for wet locations.~~ [Ord. 88-14 § 5.1, 1988].

Commented [LP25]: Optional

15.24.210 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 P-85, Protecting Manufactured Homes from Floods and Other Hazards, for additional techniques). [Ord. 2015-12 § 1, 2015; Ord. 88-14 § 5.1-1, 1988].

15.24.220 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 or located so as to prevent water from entering or accumulating within the components during conditions of flooding. [Ord. 88-14 § 5.1-2, 1988].

15.24.230 Utilities.

- A. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
- B. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters.
- C. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- D. Water wells shall be located on high ground that is not in the floodway. [Ord. 88-14 § 5.1-3, 1988].

15.24.240 Subdivision proposals.

- A. All subdivision proposals shall be consistent with the need to minimize flood damage.
- B. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
- C. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.
- D. Where 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 (whichever is less). [Ord. 88-14 § 5.1-4, 1988].

15.24.250 Review of building permits.

Where elevation data is not available either through the Flood Insurance Study or from another authoritative source (CRMC [15.24.160\(B\)](#)), 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 grade in these zones may result in higher insurance rates. [Ord. 88-14 § 5.1-5, 1988].

15.24.260 Specific standards.

In all areas of special flood hazards where base flood elevation data has been provided as set forth in CRMC [15.24.070](#) and [15.24.160](#)(B), the following provisions set out in CRMC [15.24.270](#) through [15.24.300](#) are required. [Ord. 88-14 § 5.2, 1988].

15.24.270 Residential construction.

A. ~~In A Zones where BFE has been determined or can be reasonably obtained. New~~ construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above base flood elevation. ~~Mechanical equipment and utilities shall be waterproof or elevated- at least one foot above the BFE.~~

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 floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

1. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
2. The bottom of all openings shall be no higher than one foot above grade.
3. Openings may be equipped with screens, louvers or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters. ~~[Ord. 88-14 § 5.2-1, 1988].~~

~~4. A garage attached to a residential structure, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry and exit of flood waters.~~

~~C. New construction and substantial improvement of any residential structure in an Unnumbered A zone for which a BFE is not available and cannot be reasonably obtained shall be reasonably safe from flooding, but in all cases the lowest floor shall be at least two feet above the Highest Adjacent Grade. [Ord. 88-14 § 5.2-1, 1988].~~

15.24.280 Nonresidential construction.

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 level of the base flood elevation ~~or elevated as required by ASCE 24, whichever is greater;~~ or, together with attendant utility and sanitary facilities, shall:

A. Be floodproofed so that below one foot 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;

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 section based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in CRMC [15.24.160\(C\)\(2\)](#);

D. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in CRMC [15.24.270\(B\)](#);

E. 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 floodproofed to one foot above the base flood level will be rated as at the base flood level). [Ord. 88-14 § 5.2-2, 1982].

15.24.290 Critical facility.

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the base floodplain. Construction of new critical facilities shall be permissible within the base floodplain if no feasible alternative site is available. Critical facilities constructed within the base floodplain shall have the lowest floor elevated to three feet or more above the level of the base flood elevation at the site. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base floodplain shall be provided to all critical facilities to the extent possible. [Ord. 88-14 § 5.2-3, 1988].

15.24.300 Manufactured homes.

All manufactured homes to be placed or substantially improved ~~within zones AH and AE on the community's FIRM~~ shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is one foot or more above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the provisions of CRMC [15.24.210\(B\)](#). ~~This section applies to manufactured homes to be placed or substantially improved in an expansion to an existing manufactured home park or subdivision. This section does not apply to manufactured homes to be placed or substantially improved in an existing manufactured home park or subdivision except where the repair, reconstruction or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced.~~ [Ord. 2015-12 § 1, 2015; Ord. 88-14 § 5.2-4, 1988].

15.24.305 Recreational vehicles.

~~Recreational vehicles placed on sites are required to either:~~

1. Be on the site for fewer than 90 consecutive days, or
2. Be fully licensed and ready for highway use, on wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or
3. Meet the requirements of CRMC 15.24.300 above.

15.24.307 Enclosed Area below the lowest floor.

If buildings or manufactured homes are constructed or substantially improved with fully enclosed areas below the lowest floor, the areas shall be used solely for parking of vehicles, building access, or storage.

15.24.309 AE and A1-30 zones with base flood elevation but no floodway

In areas with BFEs (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.

15.24.310 Floodways.

Located within areas of special flood hazard established in CRMC [15.24.070](#) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters 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 ~~or architect~~ is provided demonstrating that 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: (1) repairs, reconstruction or improvements to a structure which do not increase the ground floor area; and (2) repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either (a) before the repair, reconstruction or repair is started, or (b) if the structure has been damaged, and is being restored, before the damage occurred. Work done on structures to comply with existing health, sanitary or safety codes or to structures identified as historic places shall not be included in the 50 percent determination.
- C. If subsection (A) of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this article. [Ord. 88-14 § 5.3, 1988].

15.24.320 Wetlands management.

To the maximum extent possible, avoid the short- and long-term adverse impacts associated with the destruction or modification of wetlands, especially those activities which limit or disrupt the ability of the wetland to alleviate flooding impacts. The following process should be implemented:

- A. Review proposals for development within base floodplains for their possible impacts on wetlands located within the floodplain.
- B. Ensure that development activities in or around wetlands do not negatively affect public safety, health and welfare by disrupting the wetlands' ability to reduce flood and storm drainage.
- C. Request technical assistance from the Department of Ecology in identifying wetland areas. Existing wetland map information from the National Wetlands Inventory (NWI) can be used in conjunction with the community's FIRM to prepare an overlay zone indicating critical wetland areas deserving special attention. [Ord. 88-14 § 5.4, 1988].

15.24.330 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 1 to 3 feet above ground 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 addition to other provisions in this code, the following additional provisions also apply in AO zones:

1. New construction and substantial improvements of residential structures and manufactured homes within AO zones shall have the lowest floor (including basement and mechanical equipment) elevated above the highest adjacent grade to the structure, one foot or more above* the depth number specified in feet on the community's FIRM (at least two feet above the highest adjacent grade to the structure if no depth number is specified).
2. New construction and substantial improvements of nonresidential structures within AO zones shall either:
 - a) 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 FIRM (at least two feet if no depth number is specified); or
 - b) Together with attendant utility and sanitary facilities, be completely flood proofed 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 as in section 5.2-2(3).
3. Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

4. Recreational vehicles placed on sites within AO zones on the community's FIRM either:

- a) Be on the site for fewer than 180 consecutive days, or
- b) Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
- c) Meet the requirements of subsections (1) and (3) above and the anchoring requirements for manufactured homes CRMC 15.24.300, above.

Chapter 15.24

FLOOD DAMAGE PREVENTION

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Article I. Statutory Authorization, Findings of Fact, Purpose and Objectives

15.24.010 Statutory authorization.

The Legislature of the state of Washington has delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety and general welfare of its citizenry. [Ord. 88-14 § 1.1, 1988].

15.24.020 Findings of fact.

A. The flood hazard areas of Castle Rock 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. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss. [Ord. 88-14 § 1.2, 1988].

15.24.030 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

- A. To protect human life and health;
- B. To minimize expenditure of public money and costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;

F. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;

G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and

H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

I. To participate in and maintain eligibility for flood insurance and disaster relief. [Ord. 88-14 § 1.3, 1988].

15.24.040 Methods of reducing flood losses.

In order to accomplish its purposes, this chapter 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, 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 floodwaters;

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

E. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or may increase flood hazards in other areas. [Ord. 88-14 § 1.4, 1988].

Article II. Definitions

15.24.050 Definitions.

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

“AO Zones” or “Shallow Flooding Areas” means an area that appears on FIRMS as AO Zones with depth designations. The base flood depths in these zones range from 1 to 3 feet above ground 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. Further provisions for AO Zones are laid out in CRMC 15.24.270 for residential structures, and CRMC 15.24.280 for nonresidential structures.

“Alteration of watercourse” means any action that will change the location of the channel occupied by water within the banks of any portion of a riverine waterbody

"Appeal" means a request for a review of the building official or their designee's interpretation of any provision of this chapter or a request for a variance.

"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.

"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. Designation on the FIRM always includes the letter A. "Special flood hazard area" is synonymous in meaning with the phrase "area of special flood hazard".

"ASCE 24" means the most recently published version of ASCE 24, Flood Resistant Design and Construction, published by the American Society of Civil Engineers.

"Base flood" means the flood having a 1% chance of being equaled or exceeded in any given year (also referred to as the "100-year flood").

"Base Flood Elevation (BFE)" means the elevation to which floodwater is anticipated to rise during the base flood.

"Basement" means any area of the building having its floor sub-grade (below ground level) on all sides.

"Building" is synonymous with "Structure."

"Building Code" means the currently effective versions of the International Building Code and the International Residential Code adopted by the State of Washington and City of Castle Rock.

"Critical facility" means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, and installations which produce, use or store hazardous materials or hazardous waste.

"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 located within the area of special flood hazard.

"Elevation Certificate" means an administrative tool of the National Flood Insurance Program (NFIP) that can be used to provide elevation information, to determine the proper insurance premium rate, and to support a request for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-F).

"Elevated Building" means for insurance purposes, a non-basement building that has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

"Essential Facility" means this term has the same meaning as "Essential Facility" defined in ASCE 24. Table 1-1 in ASCE 24-14 further identifies building occupancies that are essential facilities.

"FEMA" means the Federal Emergency Management Agency "Flood" or "flooding" means:

1. A general and temporary condition of partial or complete inundation of normally dry land areas from:
 - a. The overflow of inland or tidal waters.
 - b. The unusual and rapid accumulation or runoff of surface waters from any source.
 - c. Mudslides (i.e. mudflows) which are proximately caused by flooding as defined in paragraph (1)(b) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.
2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (1)(a) of this definition.

"Flood elevation study" means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards. Also known as a Flood Insurance Study (FIS). "Flood Insurance Rate Map (FIRM)" means the official map on which the Federal Emergency Management Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

"Floodplain or flood prone area" means any land area susceptible to being inundated by water from any source. See "Flood or flooding."

"Floodplain administrator" means the community official designated by title to administer and enforce the floodplain management regulations.

"Flood proofing" means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents. Flood proofed structures are those that have the structural integrity and design to be impervious to floodwater below the Base Flood Elevation.

"Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Also referred to as "Regulatory Floodway."

"Functionally dependent use" means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are

necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long term storage or related manufacturing facilities.

“Highest adjacent grade” means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

“Historic structure” means any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. 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;
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - a. By an approved state program as determined by the Secretary of the Interior, or
 - b. Directly by the Secretary of the Interior in states without approved programs.

“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 chapter found at CRMC [15.24.270\(B\)](#).

“Manufactured home” means a single-family residence constructed after June 15, 1976, in accordance with state and federal requirements for manufactured homes which:

- A. Is comprised of at least two fully enclosed parallel sections each of not less than 12 feet wide by 36 feet long;
- B. Was originally constructed with and now has a composition or wood shake or shingle, coated metal, or similar roof of nominal 3:12 pitch, and
- C. Has exterior siding similar in appearance to siding materials commonly used on conventional site-built Uniform Building Code single-family residences.

“Manufactured home park or subdivision” means a plot of ground divided into lots or sites under the ownership and/or management of one person for the purpose of locating manufactured homes for dwelling purposes.

"Mean Sea Level" means, for purposes of the National Flood Insurance Program, the vertical datum to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

"New construction" means structures for which the start of construction commenced on or after the effective date of the ordinance codified in this chapter.

"One-hundred-year flood or 100 year flood" is synonymous with "Base flood."

"Reasonably Safe from Flooding" means development that is designed and built to be safe from flooding based on consideration of current flood elevation studies, historical data, high water marks and other reliable data known to the community. In unnumbered A zones where flood elevation information is not available and cannot be obtained by practicable means, reasonably safe from flooding means that the lowest floor is at least two feet above the Highest Adjacent Grade.

"Recreational Vehicle" a vehicle that is:

1. Built on a single chassis;
2. 400 square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

"Start of construction" includes substantial improvement, and means the date the building permit was issued; provided the actual start of construction, repair, reconstruction, 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 foundation 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.

"Structure" means that which is built or constructed, an edifice or building or structure, such as foundations, bearing walls, columns, beams, floor or floor joists, girders or rafters, or changes in the exterior dimensions of the building or structure, or increase in floor space. A "structure" for floodplain management purposes also means a walled and roofed building including a gas or liquid storage tank that is principally aboveground, as well as a manufactured home.

"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 Improvement.

1. “Substantial improvement” means any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

- a. Before the improvement or repair is started; or
- b. If the structure has been damaged and is being restored, before the damage occurred. For the purposes 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.

2. The term does not, however, include either:

- a. Any project for improvement of a structure to comply with existing state or local health, sanitary or safety code specifications which are solely necessary to assure safe living conditions; or
- b. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

“Water surface elevation” means the height, in relation to the vertical datum utilized in the applicable flood insurance study of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

“Variance” means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter. Criteria for a floodplain variance is outlined in Section 15.24.170.

“Water dependent” means a structure for commerce or industry which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations. [Ord. 2015-12 § 1, 2015; Ord. 88-14 § 2.0, 1988].

Article III. General Provisions

15.24.060 Lands to which this chapter applies.

This chapter shall apply to all areas of special flood hazards within the jurisdiction of Castle Rock. [Ord. 88-14 § 3.1, 1988].

15.24.070 Basis for establishing the areas of special flood hazard.

Frequently flooded areas may include lands outside of the Federal Emergency Management Agency-defined floodplains and shall include areas identified on the Flood Insurance Rate Maps. Those areas of special flood hazard identified by the Federal Emergency Management Administration are identified in a scientific and engineering report entitled Flood Insurance Study No. 53015CV001A – Cowlitz County, Washington and Incorporated Areas, Vols. 1 – 3, December 16, 2015, with accompanying Flood Insurance Rate Maps and any

revisions thereto. The Flood Insurance Study and accompanying maps are hereby adopted by reference, declared to be a part of this chapter, and are available for public review in the city clerk-treasurer's office, City Hall, 141 A Street SW, Castle Rock, Washington. [Ord. 2015-12 § 1, 2015; Ord. 2001-11, 2001; Ord. 93-6, 1993; Ord. 88-14 § 3.2, 1988].

15.24.075 Compliance

All development within special flood hazard areas is subject to the terms of this ordinance and other applicable regulations.

15.24.080 Penalties for noncompliance.

No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this chapter and other applicable regulations. Violation of the provisions of this chapter by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this chapter or fails to comply with any of its requirements shall upon conviction thereof be fined not more than \$500.00 or imprisoned for not more than 180 days, or both, for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent Castle Rock from taking such other lawful action as is necessary to prevent or remedy any violation. [Ord. 88-14 § 3.3, 1988].

15.24.090 Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this chapter and another ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. [Ord. 88-14 § 3.4, 1988].

15.24.100 Interpretation.

In the interpretation and application of this chapter, 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. 88-14 § 3.5, 1988].

15.24.110 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 chapter does not imply that

land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of Castle Rock, any officer or employee thereof, or the Federal Emergency Management Administration, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder. [Ord. 2015-12 § 1, 2015; Ord. 88-14 § 3.6, 1988].

15.24.115 Severability

This ordinance and the various parts thereof are hereby declared to be severable. Should any Section of this ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the ordinance as a whole, or any portion thereof other than the Section so declared to be unconstitutional or invalid.

Article IV. Administration

15.24.120 Establishment of development permit.

Development permits are established as set out in CRMC [15.24.130](#) and [15.24.140](#). [Ord. 88-14 § 4.1, 1988].

15.24.130 Development permit – Required.

A development permit shall be obtained before construction or development begins within any area of special flood hazard established in CRMC [15.24.070](#). The permit shall be for all structures including manufactured homes, as set forth in Article II of this chapter, and for all development including fill and other activities, also as set forth in Article II of this chapter. [Ord. 88-14 § 4.1-1, 1988].

15.24.140 Application for development permit.

Application for a development permit shall be made on forms furnished by the building official or their designee and may include but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities and the location of the foregoing. Specifically, the following information is required:

- A. Elevation in relation to mean sea level of the lowest floor (including basement) of all structures;
- B. Elevation in relation to mean sea level to which any structure has been floodproofed;
- C. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in CRMC [15.24.280](#); and
- D. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.

E. Where development is proposed in a floodway, an engineering analysis indication no rise of the Base Flood Elevation, and

F. Any other such information that may be reasonably required by the Floodplain Administrator in order to review the application.

[Ord. 88-14 § 4.1-2, 1988].

15.24.150 Building Official designated as administrator.

The building official or their designee is appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions. [Ord. 88-14 § 4.2, 1988].

15.24.160 Duties and responsibilities of the building official.

Duties of the building official or their designee shall include, but not be limited to:

A. Permit Review.

1. Review all development permits to determine that the permit requirements of this chapter have been satisfied.
2. Review all development permits 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 development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the provisions of CRMC [15.24.310](#) are met.
4. The site is reasonably safe from flooding;
5. Notify FEMA when annexations occur in the Special Flood Hazard Area.

B. Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with CRMC [15.24.070](#), the building official or their designee 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 CRMC [15.24.260](#) through [15.24.310](#).

C. Information to Be Obtained and Maintained.

1. Where 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 (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.
2. Certification required by Section CRMC 15.24.31 Floodways. (44 CFR 60.3(d)(3))

3. Records of all variance actions, including justification for their issuance. (44 CFR 60.6(a)(6))

4. Improvement and damage calculations.

5. For all new or substantially improved floodproofed structures:

a. Verify and record the actual elevation (in relation to mean sea level); and

b. Maintain the floodproofing certifications required in CRMC [15.24.140](#)(C).

6. Maintain for public inspection all records pertaining to the provisions of this chapter.

D. Alteration of Watercourses.

1. Notify adjacent communities and the Washington State Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.

2. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

E. Interpretation of FIRM Boundaries. Make interpretations, where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in CRMC [15.24.170](#) through [15.24.190](#).

F. The Floodplain Administrator shall maintain a record of all variance actions, including justification for their issuance. [Ord. 88-14 § 4.3, 1988].

15.24.170 Variance procedure – Generally.

The variance procedure is as set out in CRMC [15.24.180](#) and [15.24.190](#).

A. In considering variance applications, the City of Castle Rock shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and:

1. The danger that materials may be swept onto other lands 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;
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 time of flood for ordinary and emergency vehicles;
10. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site; and,
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 system, and streets and bridges.

[Ord. 88-14 § 4.4, 1988].

15.24.180 Appeal board.

A. The city council shall hear and decide appeals and requests for variances from the requirements of this chapter.

B. The city council shall hear and decide appeals when it is alleged there is an error in any requirement, decision or determination made by the building official or their designee in the enforcement or administration of this chapter.

C. Those aggrieved by the decision of the city council, or any taxpayer, may appeal such decision to the Cowlitz County superior court, as provided in RCW Title [34](#).

D. In passing upon such applications, the city council shall consider all technical evaluations, all relevant factors and standards specified in other sections of this chapter, and:

1. The danger that materials may be swept onto other lands 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;
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 and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
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 and water systems, and streets and bridges.

E. Upon consideration of the factors of subsection (D) of this section and the purposes of this chapter, the city council may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

F. The building official or their designee shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Administration upon request. [Ord. 2015-12 § 1, 2015; Ord. 88-14 § 4.4-1, 1988].

15.24.190 Conditions for variances.

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, providing CRMC [15.24.180\(D\)\(1\)](#) through (11) 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 structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in this section.

C. Variances shall not be issued within a 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 CRMC [15.24.180\(D\)](#), or conflict with existing local laws or ordinances.
4. Upon a showing that the use cannot perform its intended purpose unless it is located or carried out in close proximity to water. This includes only facilities defined in CRMC 15.24.050 of this ordinance in the definition of "Functionally Dependent Use."

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 those set out in subsection (A) of this section, and otherwise complies with CRMC [15.24.210](#) and [15.24.220](#).

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, that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation, and that such construction below the base flood elevation increases risks to life and property. [Ord. 88-14 § 4.4-2, 1988].

Article V. Provisions for Flood Hazard Reduction

15.24.200 General standards.

A. In all areas of special flood hazards, the following standards set out in CRMC [15.24.210](#) through [15.24.330](#) are required.

B. General Requirements for development in all areas of special flood hazards not set out in CRMC 15.24.210 through 15.24.250, are below:

1. All development, including manmade changes to improved or unimproved real estate for which specific provisions are not specified in this ordinance or the state building codes with adopted amendments and any City of Castle Rock amendments, shall:

- a. Be located and constructed to minimize flood damage;
- b. Meet the encroachment limitations of this ordinance if located in a regulatory floodway;
- c. Be anchored to prevent flotation, collapse, or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood;
- d. Be constructed of flood damage-resistant materials;
- e. Meet the flood opening requirements of Section 5.2-1(5), and
- f. Have mechanical, plumbing, and electrical systems above the design flood elevation or meet the requirements of ASCE 24, except that minimum electric service required to address life safety and electric code requirements is permitted below the design flood elevation provided it conforms to the provisions of the electrical part of building code for wet locations. [Ord. 88-14 § 5.1, 1988].

15.24.210 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 P-85, Protecting Manufactured Homes from Floods and Other Hazards, for additional techniques). [Ord. 2015-12 § 1, 2015; Ord. 88-14 § 5.1-1, 1988].

15.24.220 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 or located so as to prevent water from entering or accumulating within the components during conditions of flooding. [Ord. 88-14 § 5.1-2, 1988].

15.24.230 Utilities.

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

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

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

D. Water wells shall be located on high ground that is not in the floodway. [Ord. 88-14 § 5.1-3, 1988].

15.24.240 Subdivision proposals.

A. All subdivision proposals shall be consistent with the need to minimize flood damage.

B. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

C. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.

D. Where 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 (whichever is less). [Ord. 88-14 § 5.1-4, 1988].

15.24.250 Review of building permits.

Where elevation data is not available either through the Flood Insurance Study or from another authoritative source (CRMC [15.24.160\(B\)](#)), 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 grade in these zones may result in higher insurance rates. [Ord. 88-14 § 5.1-5, 1988].

15.24.260 Specific standards.

In all areas of special flood hazards where base flood elevation data has been provided as set forth in CRMC [15.24.070](#) and [15.24.160\(B\)](#), the following provisions set out in CRMC [15.24.270](#) through [15.24.300](#) are required. [Ord. 88-14 § 5.2, 1988].

15.24.270 Residential construction.

A. In A Zones where BFE has been determined or can be reasonably obtained new construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above base flood elevation. Mechanical equipment and utilities shall be waterproof or elevated at least one foot above the BFE.

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 floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

1. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
2. The bottom of all openings shall be no higher than one foot above grade.
3. Openings may be equipped with screens, louvers or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters.
4. A garage attached to a residential structure, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry and exit of flood waters.

C. New construction and substantial improvement of any residential structure in an Unnumbered A zone for which a BFE is not available and cannot be reasonably obtained shall be reasonably safe from flooding, but in all cases the lowest floor shall be at least two feet above the Highest Adjacent Grade. [Ord. 88-14 § 5.2-1, 1988].

15.24.280 Nonresidential construction.

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 level of the base flood elevation or elevated as required by ASCE 24, whichever is greater; or, together with attendant utility and sanitary facilities, shall:

- A. Be floodproofed so that below one foot 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;
- 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 section based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in CRMC [15.24.160\(C\)\(2\)](#);
- D. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in CRMC [15.24.270\(B\)](#);
- E. 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 floodproofed to one foot above the base flood level will be rated as at the base flood level). [Ord. 88-14 § 5.2-2, 1982].

15.24.290 Critical facility.

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the base floodplain. Construction of new critical facilities shall be permissible within the base floodplain if no feasible alternative site is available. Critical facilities constructed within the base floodplain shall have the lowest floor elevated to three feet or more above the level of the base flood elevation at the site. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base floodplain shall be provided to all critical facilities to the extent possible. [Ord. 88-14 § 5.2-3, 1988].

15.24.300 Manufactured homes.

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 one foot or more above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the provisions of CRMC [15.24.210\(B\)](#). [Ord. 2015-12 § 1, 2015; Ord. 88-14 § 5.2-4, 1988].

15.24.305 Recreational vehicles.

Recreational vehicles placed on sites are required to either:

1. Be on the site for fewer than 90 consecutive days, or
2. Be fully licensed and ready for highway use, on wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or
3. Meet the requirements of CRMC 15.24.300 above.

15.24.307 Enclosed Area below the lowest floor.

If buildings or manufactured homes are constructed or substantially improved with fully enclosed areas below the lowest floor, the areas shall be used solely for parking of vehicles, building access, or storage.

15.24.309 AE and A1-30 zones with base flood elevation but no floodway

In areas with BFEs (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.

15.24.310 Floodways.

Located within areas of special flood hazard established in CRMC [15.24.070](#) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters 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 that 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: (1) repairs, reconstruction or improvements to a structure which do not increase the ground floor area; and (2) repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either (a) before the repair, reconstruction or repair is started, or (b) if the structure has been damaged, and is being restored, before the damage occurred. Work done on structures to comply with existing health, sanitary or safety codes or to structures identified as historic places shall not be included in the 50 percent determination.

C. If subsection (A) of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this article. [Ord. 88-14 § 5.3, 1988].

15.24.320 Wetlands management.

To the maximum extent possible, avoid the short- and long-term adverse impacts associated with the destruction or modification of wetlands, especially those activities which limit or disrupt the ability of the wetland to alleviate flooding impacts. The following process should be implemented:

A. Review proposals for development within base floodplains for their possible impacts on wetlands located within the floodplain.

B. Ensure that development activities in or around wetlands do not negatively affect public safety, health and welfare by disrupting the wetlands' ability to reduce flood and storm drainage.

C. Request technical assistance from the Department of Ecology in identifying wetland areas. Existing wetland map information from the National Wetlands Inventory (NWI) can be used in conjunction with the community's FIRM to prepare an overlay zone indicating critical wetland areas deserving special attention. [Ord. 88-14 § 5.4, 1988].

15.24.330 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 1 to 3 feet above ground 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 addition to other provisions in this code, the following additional provisions also apply in AO zones:

1. New construction and substantial improvements of residential structures and manufactured homes within AO zones shall have the lowest floor (including basement and mechanical equipment) elevated above the highest adjacent grade to the structure, one foot or more above* the depth number specified in feet on the community's FIRM (at least two feet above the highest adjacent grade to the structure if no depth number is specified).
2. New construction and substantial improvements of nonresidential structures within AO zones shall either:
 - a) 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 FIRM (at least two feet if no depth number is specified); or
 - b) Together with attendant utility and sanitary facilities, be completely flood proofed 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 as in section 5.2-2(3).
3. Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.
4. Recreational vehicles placed on sites within AO zones on the community's FIRM either:
 - a) Be on the site for fewer than 180 consecutive days, or
 - b) Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
 - c) Meet the requirements of subsections (1) and (3) above and the anchoring requirements for manufactured homes CRMC 15.24.300, above.