

Chapter 24.20 FREQUENTLY FLOODED AREAS

24.20.005 Frequently flooded areas—Purposes.

The purposes of this section are to:

- A. Augment development standards in Chapter 14.38 TCC regarding development in flood hazard areas.
- B. Identify areas affected by natural flooding and stream channel migration and minimize the amount of development at risk in such areas in order to protect human life and safety; minimize damage to homes and places of business; minimize business interruptions; avoid or minimize damage to public facilities and utilities including, but not limited to, water and gas mains, electric, telephone and sewer lines, roads and bridges; and to minimize the expenditure of public funds for flood control projects, rescue and relief efforts and repair of flood damage.
- C. Preserve natural flood control by retaining the capacity of floodways to pass floodwaters and associated debris and by retaining the capacity of floodplains to store flood waters.
- D. Restrict structures, facilities, flood loss reduction measures (including, but not limited to, hard armoring and stream channelization), grading, dredging, filling and other development in areas subject to flooding that could displace flood carrying capacity or increase flood heights or velocities.
- E. Protect the quality and quantity of water sustaining humans, fish, shellfish and wildlife by avoiding or minimizing siltation and pollution associated with flooding. This includes, but is not limited to, prohibiting or restricting uses in flood prone areas that pose significant risks to water quality when they are inundated.
- F. Minimize disruption of stream channel migration that forms fish and wildlife habitat by minimizing streambank stabilization and construction of new structures that would be affected by stream channel migration.
- G. Maintain the linkages of the stream to the nutrient reserves in its floodplains.
- H. Regulate frequently flooded areas as a critical area, pursuant to RCW 36.70A.030.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.010 Frequently flooded areas—~~Applicability~~ Designated.

This chapter shall apply to areas meeting the following criteria:

- A. Special flood hazard areas shall be designated as areas within the Base Flood Elevation (BFE) and Floodway, as shown on the effective Flood Insurance Rate Maps for Thurston County;
- B. High groundwater hazard areas are areas that are subject to flood inundation from subsurface waters that result from a fluctuation of the groundwater table, and are designated on maps maintained by Thurston county GeoData;
- C. Channel migration zones are areas mapped as channel migration zones on the Washington Department of Ecology Channel Migration Zone Spatial Data Catalogue;
- D. Flood of record includes areas within the highest known flood elevation based on records and images of past flooding events. Thurston County GeoData maps indicate areas within the flood of record;

E. Coastal flood hazard areas shall be those areas designated as Zone VE on the effective Flood Insurance Rate Maps for Thurston County.

~~The provisions of this chapter apply to frequently flooded areas and one hundred year channel migration hazard areas as defined in Chapter 24.03 TCC.~~

~~(Ord. No. 14773, § 3(Att. B), 7-24-2012)~~

24.20.013 The Puget Sound Biological Opinion

All applications for development in floodplains which are subject to the Endangered Species Act – Section 7 Consultation Final Biological Opinion And Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation (BiOp) shall comply with all applicable habitat assessment requirements.

24.20.015 High ~~ground-water~~groundwater flood hazard areas—Base flood elevation.

The base flood elevation (BFE) for high ~~ground-water~~groundwater flood hazard areas corresponds to the elevation of the outer edge of the high ~~ground-water~~groundwater flood hazard area. ~~The map entitled "High Ground-Water Flood Hazard Areas" Maps maintained by Thurston County Geodata shall~~ depicts the approximate location of the high groundwater flood hazard area. The actual location of the outer edge of the flood hazard area shall be determined consistent with TCC 24.20.030 and 24.20.035, as applicable.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

~~24.20.020 High groundwater flood hazard areas—No development zone.~~

~~The no-development zone (NDZ) is an area extending fifty feet, measured on a horizontal plane, from the outer edge of the high ground-water hazard area or extending to a ground elevation two feet (vertically) above the base flood elevation, whichever is less. Development is prohibited in the no-development zone.~~

~~(Ord. No. 14773, § 3(Att. B), 7-24-2012)~~

24.20.025 High groundwater flood hazard areas—Restricted development zone.

A. ~~In situations where the no development zone is based on elevation, there may not be a restricted development zone (see Figure 24.20-1).~~ The restricted development zone (RDZ) includes areas within the base flood elevation and extends 50 feet from the outer edge of the ~~no-development zone~~base flood elevation or to a ground elevation two feet (vertically) above the base flood elevation, except:

1. The approval authority may exclude areas less than two feet in elevation above the base flood elevation from the restricted development zone if the applicant's registered professional civil engineer licensed in the State of Washington demonstrates that due to drainage patterns (including the location and size of any existing culverts and ditches), topography, physical barriers, geologic conditions, hydrology, distance from the high groundwater flood hazard area or other relevant factors that the area proposed to be removed from the restricted development zone and adjacent properties will not flood. The approval authority may consult with an engineering geologist, hydrogeologist, professional engineer, or other qualified professional as necessary, at the applicant's expense, to evaluate the flooding potential of the area proposed to be removed from the restricted development zone. The county shall provide the applicant with a cost estimate and obtain their approval prior to consulting with the experts. The application may be closed if the applicant chooses not to bear the cost of the evaluation; or

2. On sloping parcels where the topography does not reach two feet in elevation above the BFE before it falls in elevation below the base flood elevation, the approval authority shall set the outer boundary of the restricted development zone at the highest point above the base flood elevation (see Figure 24.20-2), if the applicant's registered professional engineer licensed in the State of Washington demonstrates that the area beyond has no or negligible risk of flooding. The approval authority may consult with an engineering geologist, hydrogeologist, professional engineer, or other qualified professional as necessary, at the applicant's expense, to evaluate the flooding potential of the area proposed to be removed from the restricted development zone. The county shall provide the applicant with a cost estimate and obtain their approval prior to consulting with the experts. The application may be closed if the applicant chooses not to bear the cost of the evaluation.; or
 3. If a qualified professional determines that no high groundwater flood hazard exists within 100 feet of the proposed development, the applicant may submit a letter indicating the methods utilized, including the reasoning for determining that no hazard is present.
- B. All new construction proposed in the restricted development zone shall comply with the provisions of this section and TCC 14.38.050.

Figure 24.20-1

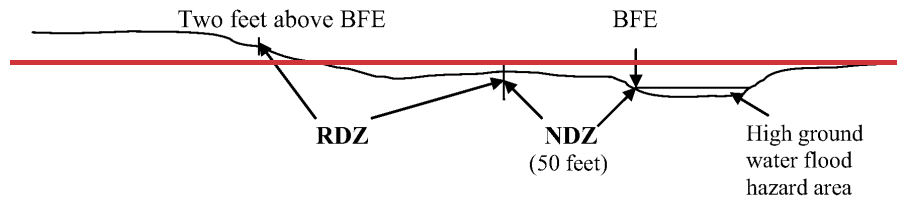
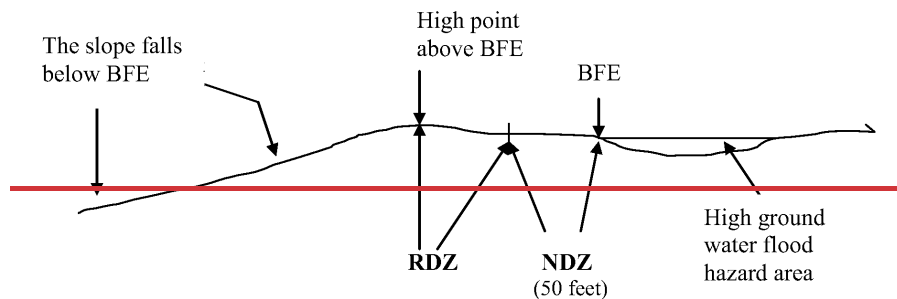


Figure 24.20-2



LEGEND FOR FIGURES 24.20-1 & 24.20-2	
BFE =	Base Flood Elevation
RDZ =	Restricted Development Zone
NDZ =	No Development Zone

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.030 High groundwater flood hazard area—Delineation.

- A. High groundwater flood hazard areas shall be delineated through a critical area review permit when a use requiring a permit per TCC Table 24.20-1 below is proposed in an area within 100 linear feet or 5 feet of elevation of a mapped high groundwater hazard area.
- B. Applicants for development of an existing lot shall submit the base flood elevation, prepared by a licensed land surveyor, for review and approval of the director, consistent with TCC 14.38.040, as follows:
 - 1. The applicant's surveyor, in consultation with the director, shall stake and flag the recommended high ground-watergroundwater edge in the field based on the high ground-watergroundwater flood hazard areas map, topography, aerial photographs of flood events and other relevant factors.
 - 2. After the director accepts the staked and flagged high ground-watergroundwater edge, the surveyor shall depict the BFE, NDZ, and RDZ on the site plan submitted to the director for review and approval.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

~~24.20.035 High groundwater flood hazard area—Map amendments.~~

- ~~A. The high groundwater flood hazard area map shall be amended consistent with the review process and requirements specified in Chapters 24.05 and 24.91 TCC.~~
- ~~B. All required hydrological studies shall be prepared by an engineering geologist or professional engineer licensed in the State of Washington with demonstrated experience, as appropriate, in hydrologic, hydrogeologic and hydraulic analysis.~~

~~(Ord. No. 14773, § 3(Att. B), 7-24-2012)~~

~~24.20.040 River, marine, lake, and coastal flood hazard areas—Map amendments.~~

~~Map amendments of maps for frequently flooded areas that are identified on the flood insurance rate maps prepared by the Federal Insurance Administration, as supplemented by "The Flood Insurance Study for Thurston County," dated November 17, 1980 shall follow the amendment procedure in TCC 14.38.090, Map correction procedures.~~

~~(Ord. No. 14773, § 3(Att. B), 7-24-2012)~~

~~24.20.045 Channel migration hazard areas—Map.~~

~~The 100-year channel migration hazard areas are generally depicted on the map entitled "channel migration hazard areas" on file with the department in the permit assistance center.~~

~~(Ord. No. 14773, § 3(Att. B), 7-24-2012)~~

~~24.20.050 Channel migration hazard areas—Map amendments.~~

- ~~A. Maps of channel migration hazards areas shall be amended consistent with the review process and requirements specified in Chapters 24.05 and 24.91 TCC.~~
- ~~B. The department shall periodically update the map as the county delineates or accepts delineations of 100-year channel migration hazard areas pursuant to this chapter.~~

1. ~~The required data must be prepared by a qualified professional proficient in fluvial geomorphology (i.e., a person who possesses a graduate degree in geology or physical geography with specialization in fluvial geomorphology and has at least two years of relevant professional experience).~~
2. ~~Any third party review shall be performed by a qualified professional proficient in fluvial geomorphology. Based on this evaluation, the approval authority will modify the channel migration hazard areas map if warranted.~~

~~(Ord. No. 14773, § 3(Att. B), 7-24-2012)~~

24.20.055 Channel migration hazards areas—Delineation—~~Unmapped hazard areas.~~

If the approval authority determines that if a proposed use along a Type S or F stream is within a historic channel migration zone, based on field conditions, historic information, LIDAR imagery or aerial photography, and the one hundred-year channel migration hazard area has not been mapped is located within a mapped planning-level channel migration zone, the approval authority shall require the applicant to determine if a one-hundred-year channel migration hazard area is present on the site and, if so, delineate its location and extent.

- A. The determination as to whether the one-hundred-year channel migration hazard area affects the subject property shall be based on the findings of a qualified professional proficient in fluvial geomorphology using a reliable methodology to determine channel migration accepted by the department (e.g., as described in the Washington Department of Natural Resources' Forest Practices Board Manual, Standard Methods for identifying Channel Migration Zones and Bankfull Channel Features, dated ~~8/2001~~, as amended; or in "A Framework for Delineating Channel Migration Zones," Washington Department of Ecology, 2003, as amended; or utilizing "The Channel Migration Toolbox," Washington Department of Ecology, dated 2014, as amended; or referencing "Channel Migration Processes and Patterns in Western Washington," Washington Department of Ecology, dated 2014, as amended.)

Maps delineating the one-hundred-year channel migration hazard area shall be of a scale and format specified by the department.

- B. The following areas shall be considered outside of the one-hundred-year channel migration hazard area:
 1. Areas separated from the stream channel by a legally established structure that the approval authority, in consultation with a qualified professional, determines will block channel migration. This may include, but is not limited to, dikes, levees and public roads that extend above the one-hundred-year flood elevation that are constructed to remain intact through a one-hundred-year flood. Constraints to channel migration that do not extend above the one-hundred-year flood elevation shall not be considered to limit channel migration unless demonstrated otherwise based on technical information; and
 2. Areas separated from the stream channel by a geologic feature, such as a rock outcrop, that the approval authority determines, in consultation with a qualified professional, will stop channel migration.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.060 ~~Frequently flooded areas~~—Building setbacks—Coastal flood hazard areas.

- A. Coastal Flood Hazard Areas. Uses in coastal flood hazard areas are allowed landward of the reach of mean high tide, subject to the provisions of Chapter 14.38 TCC. New construction, additions affixed to the side of

an existing structure, and substantial improvement of any structure with a crawl space may only be located landward of a line three feet above the regulatory tidal base flood elevation, consistent with Chapter 24.25 TCC and the Shoreline Master Program for Thurston Region. Applicants may propose to elevate structures higher than the minimum to account for future sea level rise.

B. Refer to Chapter 14.38 TCC regarding crawl spaces.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.063 Flood of Record — Notice on title

A. When development requiring a permit according to table 24.20-1 is proposed to be built in full or in part within the mapped flood of record, the applicant shall record a notice on the property title with the Thurston County Auditor that;

1. Acknowledges that the structure is located within an area of potential flood hazard which could pose a threat to human property, life , and safety; and
2. Acknowledges that the owner and all future owners take complete responsibility for development and occupation of the residence or structure and hold Thurston County and its employees harmless for any damage, injury, or loss of life suffered because of flood hazards; and
3. Acknowledges that evacuation is the sole responsibility of the owner or occupant and that information on flood hazards safety is available from local emergency management agencies.

B. The requirement to record a notice on title shall be reviewed and verified though a critical areas review permit for all uses requiring a permit according to TCC Table 24.20-1 below. No additional reporting or construction standard requirements pertaining to flood hazards shall apply on the basis of a flood of record designation.

24.20.065 Floodways—Development and uses.

Encroachments, including new construction, substantial improvements, fill and other development, are prohibited within designated floodways, unless otherwise authorized by this chapter.

- A. In addition to the requirements of Chapter 24.45 TCC, a reasonable use exception for development in a floodway shall be required to demonstrate the following:
1. Hydrologic and hydraulic analyses performed by a registered professional engineer licensed in the State of Washington, that demonstrate, in accordance with standard engineering practices, that the proposed project will not result in an increase in flood levels during discharge of the base flood.
 2. New construction and substantial improvements, as defined in TCC 14.38.020 shall comply with all applicable flood hazard reduction provisions in Chapter 14.38 TCC.
- B. Recreational Vehicles.
1. Recreational vehicles parked in the floodway shall not be left unattended for more than twenty-four consecutive hours during the flood season, between November 1 and March 15; and
 2. Travel trailers parked in the floodway shall have the wheels and tongue attached for ease and rapidity of evacuation. Only quick disconnect utilities may be used. Permanent additions to travel trailers parked in the floodway are prohibited.
- C. Temporary structures and hazardous materials shall be removed from the floodway during flood season (i.e., November 1 to March 15). If the approval authority determines that flooding is imminent

and the owner is not present, they may, at the owner's expense, move the structure(s), its contents, and any vehicles to higher ground.

- D. For any approved development in the floodway, a notice shall be recorded on the property title indicating that its use is subject to Title 24 TCC and Chapter 14.38 TCC.
- E. Projects specifically designed to protect, create or restore anadromous/native fish habitat may be allowed in or along ~~Type S and F~~ streams without the hydrologic and hydraulic engineering analysis, if the approval authority determines that the project will not significantly obstruct flood flows or increase flood elevations. If the effect of the proposed project on flooding is in doubt, the approval authority may require that a qualified professional in the field of hydraulics review the proposed project consistent with paragraph (A)(1) above, at the applicant's expense, in order to determine if it will exacerbate flooding.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.070 Frequently flooded areas—Standards and allowable uses and activities.

Table 24.20-1 identifies the land uses and activities that are allowable in frequently flooded areas (i.e., one-hundred-year floodplains, one-hundred-year flood zone (one percent flood zone), floodways, high ~~ground water~~groundwater hazard areas/restricted development zones, channel migration hazard areas, and coastal flood hazard areas), flood of record areas and one-hundred-year channel migration hazard areas. All land uses and activities not allowed by or not mentioned in Table 24.20-1, except water dependent uses allowed under the Shoreline Master Program for Thurston Region, are prohibited within the flood and channel migration hazard areas regulated by this section, except as otherwise provided in Chapter 24.01 TCC. In addition to this chapter, these allowable uses and activities may be subject to the following:

- A. Other applicable provisions of this title and requirements of the applicable zoning district;
- B. The provisions of Chapter 14.38 TCC, Development in Flood Hazard Areas;
- C. The Shoreline Master Program for the Thurston Region;
- D. The Drainage Design and Erosion Control Manual for Thurston County, as amended (Chapter 15.05 TCC); and
- E. All other applicable county, state, and federal regulations.

Table 24.20-1. Allowable Uses and Activities in Flood and Channel Migration Hazard Areas

Uses and Activities	Floodways	Frequently Flooded Areas (except floodways and high groundwater hazard areas) <u>Special Flood Hazard Areas (Except Floodway)</u>	Channel Migration Hazard Areas	High Ground Water <u>Groundwater</u> Hazard Areas/RDZ	Coastal Flood Hazard Areas	<u>Flood of Record</u>

Accessory structures - Construction TCC 24.20.080	X	<u>XP</u>	P	P	P	<u>P</u>
Agricultural activity, new	P	A	A	A	P	<u>A</u>
Agricultural equipment and facility	X	P	P	P	X	<u>P</u>
Antenna support structures regulated by Chapter 20.33 TCC 24.20.080	X	P	P	P	X	<u>P</u>
Asphalt plants	X	X	X	X	X	<u>X</u>
Boat ramp and associated vehicle access TCC 24.20.080	P	P	P	P	P	<u>A</u>
Boat site, hand launch - Construction TCC 24.20.080	P	P	P	N/A	P	<u>A</u>
Bridges and culverts - Maintenance or repair TCC 24.20.080; 24.20.140	P	P	P	A	A	<u>A</u>
Bridges and culverts - Replacement or expansion TCC 24.20.145	P	P	P	A	P	<u>A</u>
Bridges and culverts - New construction TCC 24.20.140	P	P	P	P	P	<u>A</u>
Cemeteries TCC 24.20.080	X	X	X	X	X	<u>X</u>
Clearing and grading/timber harvest in conjunction with a development project TCC 24.20.090	P	P	P	P	P	<u>A</u>
Critical facilities TCC 24.20.080	X	X	X	X	X	<u>X</u>
Drainage ditch maintenance TCC 24.20.080	A	A	A	A	A	<u>A</u>
Drilling and testing for required report or engineering study TCC 24.20.080	A	A	A	A	A	<u>A</u>
Emergency response	SEE CHAPTER 24.90 TCC					
Existing lots approved prior to the effective of the ordinance from which this title derives - Construction of primary structures and associated, decks, garages, and appurtenant structures	X	P	P	P	P	<u>P</u>
Fences	X	A	A	A	A	<u>A</u>

Fill - Associated with a permitted use TCC 24.20.100 TCC 14.38	X	P	P	P	X	<u>P</u>
Fish hatchery construction and maintenance TCC 24.20.080	P	P	P	P	P	<u>P</u>
Floats (e.g., a floating dock, mooring buoy, navigational aid, and swimming float) - Installation TCC 24.20.080	P	X	X	N/A	A	<u>A</u>
Flood protection facilities - New construction TCC 24.20.080	P	P	P	P	X	<u>P</u>
Flow control facilities/dams - New construction TCC 24.20.080	P	P	P	P	X	<u>P</u>
Forestry - Conversion Class IV forest practice TCC 24.20.080	P	P	P	P	P	<u>A</u>
Gardens for personal consumption - New and expanded TCC 24.20.080	A	A	A	A	A	<u>A</u>
Golf courses TCC 24.20.080	X	P	P	P	P	<u>A</u>
Habitat restoration/enhancement TCC 24.20.080	P	P	P	P	P	<u>A</u>
Hazardous substances TCC 24.20.120	X	X	<u>XP</u>	X	X	<u>A</u>
Hazardous substances - Residential Scale TCC 24.20.120	P	P	P	P	P	<u>P</u>
Infiltration of reclaimed water (application to the land's surface above agronomic rates)* TCC 24.20.132 *Critical area regulations will be proposed when more information is available to Thurston County from the Regional Groundwater Recharge Scientific Study, and using other studies and information for reclaimed	X	<u>PX</u>	X	X	X	<u>A</u>

water following the requirements of the Growth Management Act (Chapter 36.70A RCW)-						
<u>Managed aquifer recharge and aquifer storage and recovery with a water source other than reclaimed water</u> TCC 24.20.132	<u>X</u>	<u>P</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>A</u>
Instream structures - Maintenance or repair TCC 24.20.080	A	A	N/A	A	A	<u>A</u>
Instream structures not addressed above - New construction TCC 24.20.080	P	N/A	N/A	P	N/A	<u>A</u>
Lawfully established existing uses	A	A	A	A	A	<u>A</u>
Lawns, landscaping, golf courses, and cemeteries - Maintenance TCC 24.20.080	A	A	A	A	A	<u>A</u>
Marine railway TCC 24.20.080	X	P	P	N/A	P	<u>A</u>
Mineral extraction TCC 24.20.080	X	X	X	P	X	<u>P</u>
Mitigation required by the County TCC 24.20.080	P	P	P	P	P	<u>P</u>
Nonconforming structure/use - Maintenance, repair, alteration, expansion, intensification, or replacement	SEE CHAPTER 24.50 TCC					
On-site sewage disposal system - New TCC 24.20.130	X	X	P	X	X	<u>P</u>
On-site sewage disposal system, drainfield, or well/pump - Maintenance or repair TCC 24.20.130	P	P	A	A	A	<u>A</u>
Open space (e.g., critical area tract)	A	A	A	A	A	<u>A</u>
Piers - Construction TCC 24.20.080	P	P	X	N/A	A	<u>A</u>
Ponds - New creation <1 acre TCC 24.20.080	X	P	P	P	X	<u>P</u>
Public facility TCC 24.20.080	X	X	X	X	X	<u>X</u>

Public park facilities, trails and developed recreation areas - Maintenance TCC 24.20.080	A	A	A	A	A	<u>A</u>
Public project of significant importance TCC 24.20.080	X	X	X	X	X	<u>X</u>
Recreation (outdoors) - Passive and low impact activities (e.g., bird watching, boating, bicycling, canoeing, fishing, hiking, horseback riding, hunting, jogging, photography, swimming, and similar activities)	A	A	A	A	A	<u>A</u>
(Active) Recreation facilities (e.g., swimming access, public and private parks, day camps and camping sites not including structures) TCC 24.20.080	X	P	P	P	P	<u>P</u>
Research (e.g., education, scientific, and site investigation) TCC 24.20.080	A	A	A	A	A	<u>A</u>
Residential - Single-family home, new TCC 24.20.135	X	X	P	P	X	<u>P</u>
Roads/railroads - Repair and maintenance TCC 24.20.080	A	A	A	A	A	<u>A</u>
Roads/railroads - Replacement of lawfully established roads/railroads within maintained, improved (paved or railroad tracks) road rights-of-way or easements, or railroad prism TCC 24.20.145	P	P	P	A	A	<u>A</u>
Roads - Expansion TCC 24.20.080	P	P	P	P	P	<u>A</u>
Roads - New construction, including private access TCC 24.20.140	P	P	P	P	P	<u>P</u>
Scientific sampling TCC 24.20.080	A	A	A	A	A	<u>A</u>
Shoreline protective structures/armoring (e.g., bulkhead, gabion, riprap, or	P	P	P	P	P	<u>A</u>

wall) TCC 24.20.080						
Signs (e.g., interpretation, critical area tract, and survey markers,)	A	A	A	A	A	<u>A</u>
Ski lake - Creation TCC 24.20.080	X	P	P	A	A	<u>A</u>
Slope stabilization or retaining wall (not a bulkhead) TCC 24.20.080	P	P	P	P	P	<u>P</u>
Stabilization techniques (nonstructural)/bioengineering TCC 24.20.080	P	P	P	P	P	<u>P</u>
Stair lower, stairway or mechanical lift TCC 24.20.080	X	P	X	P	P	<u>P</u>
Stormwater conveyance system or detention/treatment facility - Maintenance or repair TCC 24.20.150	P	A	A	A	A	<u>A</u>
Stormwater retention/treatment facility - Construction TCC 24.20.150	X	P	P	P	X	<u>P</u>
Stormwater - Sediment control ponds (temporary) - Construction TCC 24.20.150	X	P	P	P	P	<u>A</u>
Stormwater - Surface water conveyance system - Construction TCC 24.20.150	P	P	P	P	P	<u>P</u>
Stream flow and elevation gages - Installation	A	A	A	A	A	<u>A</u>
Stream relocation (see Chapter 24.25 TCC)	P	P	P	P	P	<u>P</u>
Subdivisions (see Chapter 24.55 TCC)	P	P	P	P	P	<u>P</u>
Trails/paths, elevated walkways, and associated facilities - New construction (interpretative site and viewing platform) TCC 24.20.080	P	P	P	P	P	<u>A</u>
Utility facilities and lines - Maintenance or repair TCC 24.20.080	A	A	A	A	A	<u>A</u>

Utilities - Replacement TCC 24.20.080	P	P	P	P	P	<u>A</u>
Utility transmission lines - New construction outside of existing improved roads and utility corridors and new utility corridors TCC 24.20.165	P	P	P	P	P	<u>A</u>
Utility lines in improved roads and utility corridors and easements - New installation or replacement TCC 24.20.165	P	A	P	A	A	<u>A</u>
Utility service lines - Installation TCC 24.20.165	P	A	A	A	A	<u>A</u>
Utility facility - New facilities such as lift stations, substations and utility poles TCC 24.20.165	X	P	X	P	P	<u>P</u>
Vegetation removal - Enhancement projects TCC 24.20.170	P	A	P	A	A	<u>A</u>
Vegetation removal - Noxious weeds TCC 24.20.170	A	A	A	A	A	<u>A</u>
Vegetation removal - Invasive vegetation TCC 24.20.170	P	P	A	A	A	<u>A</u>
Vegetation removal - Hazard trees TCC 24.20.170	P	P	P	P	P	<u>A</u>
Vegetation removal - Aquatic weeds TCC 24.20.170	P	N/A	N/A	N/A	N/A	<u>N/A</u>
Wells - New construction TCC 24.20.180	X	P	P	P	X	<u>A</u>
Wildlife blind or nesting structure	A	A	A	A	A	<u>A</u>
Uses allowed in the applicable zoning district/shoreline master program not listed elsewhere in this table	X	X	X	P	A	<u>A</u>

LEGEND:

A = Allowed, subject to applicable standards

P = Allowed, subject to applicable standards and Critical Areas Review Permit

X = Prohibited

(Ord. No. 14773, § 3(Att. B), 7-24-2012; Ord. No. 14961, §§ 2(Att. B), 5(Att. E), 12-17-2013; Ord. No. 16260, § 2(Att. B, § V), 3-21-2023)

24.20.080 Frequently flooded areas—General standards.

The following requirements apply, as applicable, to all uses and activities listed in Table 24.20-1.

- A. Applications to undertake a use or activity within frequently flooded areas or a 100-year channel migration hazard area shall contain all information necessary to evaluate the proposed activity, its impacts, its compliance with the applicable provisions of this chapter and Chapter 14.38 TCC, Development in Flood Hazard Areas.
- B. All development in frequently flooded areas and one-hundred-year channel migration hazard areas shall be designed to avoid habitat degradation, consistent with Chapter 24.25 TCC, Fish and Wildlife Habitat Conservation Areas.
- C. Development in frequently flooded areas shall be designed so it does not increase flood hazards, except as provided for in this section and Chapter 14.38 TCC.
- D. The approval authority shall deny proposed developments and uses if it is determined that they would require structural flood hazard reduction measures including, but not limited to, channeling the floodway or creating a new impact upstream or downstream at the time of construction/implementation or anytime thereafter, except as provided for in Chapter 24.25 TCC.
- E. Excavation and development shall be prohibited in the one-hundred-year floodplain ~~of Type S and F~~ of streams if the approval authority determines that it would cause significant dewatering of the hyporheic zone (the saturated zone located beneath and adjacent to streams with subsurface flow between surface water and the water table), block ~~ground-water~~groundwater flow or significantly inhibit recharge of the hyporheic zone. The approval authority may require the applicant to submit data as necessary to determine if excavation, soil compaction, or impervious surfaces associated with the project would cause significant, detrimental disruption to the ~~ground-water~~groundwater system.
- F. 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 of frequently flooded areas or usages permitted within such areas will not be subject to flooding or flood damage. This chapter shall not create liability on the part of Thurston County, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.085 Biosolid application.

Biosolid application and uses shall be regulated by the Washington Department of Ecology and meet all applicable federal and state standards, including Chapter 173-308 WAC; and be consistent with a memorandum of agreement (MOA), or similar document, between Thurston County and the Washington Department of Ecology in regard to biosolids and critical areas.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.090 Frequently flooded areas—Clearing and grading.

Clearing and grading within frequently flooded areas, channel migration hazard areas, and in the restricted development zone associated with high groundwater flood hazard areas is only allowed in conjunction with a use permitted pursuant to this chapter if it complies with all of the following:

- A. Clearing and grading are the minimum necessary to accommodate the permitted use, as determined by the approval authority.
- B. The soil duff layer shall remain undisturbed to the maximum extent practicable. In areas that are disturbed during construction but will not be covered by impervious surfaces, the moisture-holding capacity of the topsoil layer shall be maintained by minimizing soil compaction, by amending the soil with compost (consistent with TCC 24.20.100) or by stripping, stockpiling and reapplying the topsoil. Where feasible and appropriate, as determined by the approval authority, graded soil shall be redistributed to disturbed areas on the project site, provided it does not increase the flood elevation and complies with other applicable provisions of this chapter and Chapter 14.38 TCC.
- C. The clearing limits shall be marked with a temporary fence authorized by the County.
- D. Clearing and grading shall only occur between May 1 and September 30. The County may temporarily suspend grading during this period if excessive rainfall could cause erosion and sedimentation that would affect a wetland or water body. The County may allow clearing and grading outside of this period if all drainage will flow away from all potentially affected wetlands and water bodies, remain on site and the site is stabilized per Chapter 15.05 TCC.
- E. Clearing in channel migration hazard areas. See Chapter 24.25 TCC regarding clearing restrictions in riparian management zones.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.100 Frequently flooded areas—Fill.

- A. High ~~Ground Water~~Groundwater Flood Hazard Areas.
 - 1. No fill may be placed within a designated high groundwater flood hazard area ~~or no-development zone~~, except to the minimum extent necessary, as determined by the approval authority, to elevate existing access roads serving existing, developed lots to the base flood elevation. Any such fill material shall be stabilized consistent with TCC Section 14.38.050(A)(5).
 - 2. Fill may be used in the restricted development zone outside of the Base Flood Elevation as follows:
 - a. The approval authority may approve balanced cut and fill to the minimum extent necessary for construction of an approved use listed in Table 24.20-1, if a professional civil engineer licensed in the State of Washington demonstrates that the fill or grading will not block natural drainage or increase flood hazards on or offsite.
 - b. Fill may be used to the minimum extent necessary, as determined by the approval authority, to construct a road to access essential public facilities or primary structures if no less damaging or hazardous alternative location exists for the access road outside of the restricted development zone. The access road's surface shall be constructed to an elevation equal to the base flood elevation.
 - c. The approval authority may allow the road to be elevated up to two feet above the base flood elevation provided arched, bottomless culverts will be installed to allow passage of water and the

applicant's professional civil engineer licensed in the State of Washington demonstrates that flooding will not be increased offsite or inundate structures.

- d. Fill material authorized pursuant to this section and any subsequent stabilization shall be such that the fill is stable during flooding, consistent with TCC Section 14.38.050(A)(5).
- B. ~~Floodplain~~**Special flood hazard areas**. The approval authority may only approve balanced cut and fill with compensatory flood storage within the 100-year floodplain, landward of the floodway, to the minimum extent necessary for construction of an approved use listed in Table 24.20-1 or to provide access to essential public facilities, if a qualified professional engineer licensed in the State of Washington and a qualified wildlife habitat biologist demonstrate that there is no other alternative method for constructing the proposed use and that such grading and filling will not block stream side channels, increase flood hazards, inhibit channel migration or degrade important habitats (see Chapter 24.25 TCC), and that the proposal meets the requirements of Chapter 14.38 TCC. Applications for balanced cut and fill with compensatory flood storage shall include a winter water study.
- C. Coastal Flood Hazard Areas. Fill for structural support of buildings is prohibited in coastal high hazard areas.

(Ord. No. 14773, § 3(Att. B), 7-24-2012; Ord. No. 14961, § 5(Att. E), 12-17-2013)

24.20.110 Frequently flooded areas—Flood hazard reduction.

Proposals for flood hazard reduction shall be consistent with Chapter 24.25 TCC.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.120 Frequently flooded areas—Hazardous facilities and materials.

- A. Storage of hazardous materials, sewage sludge, fertilizers, pesticides, herbicides, or chemical or biological substances defined as a hazardous/dangerous waste in Chapter 173-303 WAC, or any other substances, solids or liquids in quantities regulated by TCC 24.10.140, shall be stored out of floodways and above the one-hundred-year flood elevation consistent with Chapter 14.38 TCC where they are at least risk of being inundated with floodwater, consistent with Chapters 173-303 WAC and 173-360 WAC, Chapter 14.32 TCC, International Fire Code, and Article VI of the Rules and Regulations of the Thurston County Board of Health Governing Nonpoint Source Pollution.
- B. The director may require removal of temporary staging areas or stockpiles of equipment, materials or substances in the floodway and/or floodplain between November 1 and March 15 if it is determined that such use or activity is hazardous to the public health, safety or welfare.
- C. Use and storage of hazardous materials at typical residential scale are allowed for legally approved residential uses, subject to applicable sections of the Thurston County Code and Thurston County Sanitary Code.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.130 Frequently flooded areas—New on-site sewage disposal systems.

- A. New on-site sewage disposal systems shall be located outside the one-hundred-year floodplain, floodway, coastal high hazard areas, and high ~~ground-water~~**groundwater** flood hazard areas, including the ~~no development and~~-restricted development zones. This may require systems that provide a higher level of sewage treatment. The sewage disposal system shall be located as far from the frequently flooded area as

possible. Also see Article IV, the Rules and Regulations of the Thurston County Board of Health Governing Disposal of Sewage, and WAC 173-160-171.

- B. New on-site sewage disposal systems shall be located outside the one-hundred-year channel migration hazard area, except as provided in Chapter 24.50 TCC. This may require systems that provide a higher level of sewage treatment. The sewage disposal system shall be located as far from the frequently flooded area as possible. Also see Article IV, the Rules and Regulations of the Thurston County Board of Health Governing Disposal of Sewage, and WAC 173-160-171.
- C. Failing on-site sewage disposal systems shall be immediately remedied consistent with the Rules and Regulations of the Thurston County Board of Health Governing Disposal of Sewage, Chapter 14.38 TCC, and, if applicable, Chapter 24.25 TCC. The approval authority may require the applicant to demonstrate that due to physical constraints (e.g., topography, soil conditions or the configuration of the site), another site configuration would not allow the development to occur without intrusion or with less intrusion into the hazard area than the proposal.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.132 Frequently flooded areas—Reclaimed water.

~~Section reserved for future critical area reclaimed water regulations. Critical area regulations will be proposed when more information is available to Thurston County from the regional groundwater recharge scientific study, and using other studies and information for reclaimed water following the requirements of the Growth Management Act (Chapter 36.70A RCW). Aquifer storage and recover (ASR) and managed aquifer recharge (MAR) projects must comply with all applicable local, state, and federal guidelines. ASR and MAR projects are subject to permitting by the Washington Department of Ecology.~~

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.135 Frequently flooded areas—Residential—Single-family homes.

- A. Residential and accessory structures, and typical residential-scale activities are prohibited, except as allowed under Chapters 24.50 and 24.55 TCC, this chapter, and other applicable sections of the Thurston County Code and Thurston County Sanitary Code. Onsite septic systems, including those associated with residential uses, are addressed in TCC Section 24.20.130. Gardens for personal consumption are permitted as consistent with Table 24.20-1.
- B. Use and storage of hazardous materials at typical residential scale are allowed for legally approved residential uses, subject to applicable sections of the Thurston County Code and Thurston County Sanitary Code.
- C. Residential structures are prohibited in the floodway entirely, per TCC 14.38.050. New residential structures proposed in the floodway shall not be permitted, including through a reasonable use exception.

(Ord. No. 14773, § 3(Att. B), 7-24-2012; Ord. No. 14961, § 5(Att. E), 12-17-2013)

24.20.140 Frequently flooded areas—Roads, bridges and culverts.

- A. New roads, bridges, and culverts shall be designed to minimize interruption of the downstream movement of wood and gravel, minimize fill, and allow passage of one-hundred-year flood flows and associated debris. Bridge piers and abutments shall not be placed in either the floodway or between the stream's ordinary high water marks unless there is no alternative placement, the placement results in zero increase in the

backwater elevation or increase in downstream hazards during the one-hundred-year flood, and the placement minimizes habitat degradation. (See Chapter 24.25 TCC regarding road alignments in riparian habitat areas.)

- B. Clearing of culverts does not require a critical area permit, though state and federal permits may still be required. Clearing of culverts shall be limited to removal of sediment and debris from the culvert and its inlet, invert, and outlet.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.145 Frequently flooded areas—Roads, bridges and culverts—Replacement.

Replacement of a road, bridge or culvert is allowed if necessary to conform to current standards and if:

- A. It was lawfully established;
- B. There is not another alternative available that has less adverse impact on the frequently flooded area;
- C. The bridge or culvert is designed to avoid or, where that is not possible, minimize impacts to the frequently flooded area and it is in compliance with Chapter 14.38 TCC.
- D. The replacement is consistent with the provisions of TCC 24.25.130.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.150 Frequently flooded areas—Stormwater retention, treatment, and conveyance facilities.

- A. Maintenance and repair of existing stormwater retention, detention, treatment, and conveyance systems is permitted.
- B. New stormwater facilities and swales proposed to store, treat and/or convey stormwater may be constructed consistent with the Drainage Design and Erosion Control Manual for Thurston County, as amended (Chapter 15.05 TCC), and Chapter 24.25 TCC.
- C. Temporary sediment ponds are allowed in the RDZ associated with high ~~ground-water~~**groundwater** hazard areas between March 16 and October 31. Temporary ponds may be located in other flood and channel migration hazard areas during this same time period if they comply with Chapter 24.25 TCC.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.160 Frequently flooded areas—Timber harvest.

The approval authority may authorize the cutting of hazard trees in floodways, one-hundred-year floodplain, coastal high hazard areas, and one-hundred-year channel migration hazard areas consistent with Chapters 24.25 and 14.38 TCC.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.165 Frequently flooded areas—Utilities.

- A. New Utility Lines and Facilities in Rights-of-Way. Installation of utility lines and facilities is permitted in existing rights-of-way within frequently flooded areas, channel migration hazard areas and associated

buffers, consistent with applicable regulations (see Title 13 and 14, TCC) and the provisions of this chapter. When possible, given physical and technical constraints, utility installation shall occur on the side of the utility corridor or road furthest from the hazard area. In the event that other critical areas are present, the approval authority, in consultation with others with expertise, shall determine where the proposed facilities would have the least impact on the critical areas and associated buffers. Mitigation of any impacts may be required consistent with the provisions of this title.

B. Individual Service Lines.

1. Overhead lines and cables serving an individual use are permitted in frequently flooded areas, channel migration hazard areas, and their associated buffers if:
 - a. They meet state and federal requirements;
 - b. The alignment has the least impact on the critical area and buffer;
 - c. They do not adversely impact anadromous fish; and
 - d. The alignment meets the requirement of Chapter 14.38 TCC.
2. Buried service lines serving an individual use are permitted in frequently flooded areas and associated buffers, with the exception of floodways, consistent with this chapter. The construction of utility service lines shall not have more than a temporary adverse impact. The site shall be restored upon completion of the installation.

C. New Transmission Lines/Utility Corridors.

1. Where possible, new transmission and distribution lines, and cables crossing frequently flooded areas or buffers shall be contained within an existing roadbed, railroad bed, bridge, elevated walkway, conduit, or other disturbed area where they would have the least adverse impact. If the utility lines will be consolidated with or parallel to an existing utility crossing, they shall be located at the minimum separation distances established by the county for such uses, so long as the minimum distances so established also meet the applicable industry, state and national gas and electric safety standards.
2. The approval authority shall not authorize a new utility corridor within a frequently flooded area or channel migration hazard area unless the applicant demonstrates that there is no alternative available outside the critical area. When proposing to cross frequently flooded areas and channel migration hazard areas, the applicant shall demonstrate to the approval authority's satisfaction that the crossing is essential and there is no alternative alignment or crossing method. This shall include identification of the alternative alignments, crossing methods (including boring), their feasibility, and potential impacts.
3. When it is necessary to cross a frequently flooded area or channel migration hazard area, the corridor shall be in compliance with the following standards:
 - a. The corridor shall be aligned where it would have the least impact. Where crossing is permitted, the least damaging alternative method and alignment shall be used, including the minimum width practical.
 - b. The utility corridor shall provide for other necessary uses and facilities whenever possible. Conduit containing new utilities shall be sized to provide capacity for additional lines and cables in the future when feasible.
 - c. If the approval authority determines that overhead lines or lines buried in trenches would be detrimental to dependent fish or wildlife, the proposed crossings shall, when physically feasible, be accomplished by boring beneath the critical area. Entrance and exit portals shall be located outside of the critical area, if possible. Bore pits shall be restored upon project completion.

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- i. If trenching or boring is proposed to be used to accommodate utility lines, the applicant shall evaluate its effect on the flow of groundwater. As determined by the review authority, the applicant may be required to submit a hydrological study to determine whether ~~ground-water~~groundwater flows would likely be altered to the detriment of the frequently flooded area. The approval authority may call upon technical experts as needed, at the applicant's expense, to evaluate the report.
 - ii. Trenching and boring shall not be required/allowed if it would interrupt the ~~ground~~watergroundwater connection to the extent that the stream or dependent wildlife would be damaged.
 - d. Utility corridors shall be revegetated with appropriate native vegetation, at not less than preconstruction densities. Restoration shall occur immediately upon completion of construction or as soon thereafter as possible due to seasonal constraints or work windows established pursuant to this chapter. The applicant shall submit a performance surety consistent with Chapter 24.70 TCC to ensure that the planted vegetation survives or is replaced.
 - e. Staging areas for equipment and materials shall be located outside of the critical area and buffer.
 - f. Applicants shall submit a maintenance plan for approval by the county consistent with the provisions of this chapter.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.170 Frequently flooded areas—Vegetation removal.

Harvesting of plants and plant materials is permitted in flood hazard and channel migration hazard areas consistent with Chapters 24.25 and 24.30 TCC.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.20.180 Frequently flooded areas—Wells.

New wells shall be located outside the one-hundred-year floodplain, floodway, coastal high hazard areas, high ~~ground-water~~groundwater flood hazard areas, and the high ~~ground-water~~groundwater flood hazard areas ~~s-no development zone~~. Within one-hundred-year channel migration hazard areas, new wells are permitted, subject to Chapter 24.50 TCC. Wellheads shall be located a minimum of two feet above base flood elevation. The well and all approved appurtenances shall be located as far from the frequently flooded area as possible. Also see WAC 173-160-171.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)