

D. Placing a manufactured home on a site.

E. Placing a recreational vehicle or travel trailer on a site for more than 180 days.

#### **18.10.310 Flood Protection Standards**

A. All new structures and substantial improvements shall have the lowest floor, including basement, elevated above the FPE.

B. The structure shall be aligned parallel with the direction of flood flows where practicable.

C. All new construction and substantial improvements, including those related to manufactured homes, shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads including the effects of buoyancy.

D. All materials below the FPE shall be resistant to flood damage and firmly anchored to prevent flotation. Materials harmful to aquatic wildlife, such as creosote, are prohibited below the FPE.

E. Electrical, heating, ventilation, duct work, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located elevated above the FPE. Water, sewage, electrical, and other utility lines below the FPE shall be constructed so as to prevent water from entering or accumulating within the components during conditions of flooding.

F. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be used only for parking, storage, or building access and 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 shall either be certified by a registered professional engineer or licensed architect and/or 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 floodwaters.

G. In Zones V, V1-30 and VE, new structures and substantial improvements shall be elevated on pilings or columns so that:

1. The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated above the FPE.

2. The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building

components. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).

3. The areas below the lowest floor that are subject to flooding shall be free of obstruction.

4. The structure or improvement shall be located landward of the reach of mean high tide.

5. The use of fill for structural support of a structure or addition is prohibited.

6. A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting these provisions.

### **18.10.320 Nonresidential Construction**

1) New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall meet all of the following requirements: be elevated in accordance with Section 18.10.300. As an alternative to elevation, a new or substantial improvement to a nonresidential structure and its attendant utility and sanitary facilities, may be dry floodproofed in A Zones. The project must meet the following:

a)A. In AE areas where the BFE has been determined or can be reasonably obtained: New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall have the lowest floor, including basement, elevated one foot or more above the BFE, or elevated as required by ASCE 24, whichever is greater. Mechanical equipment and utilities shall be waterproofed or elevated at least one foot above the BFE, or as required by ASCE 24, whichever is greater. The structure is not located in Zones V, V1-30, or VE; and

b)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:

i. Have a minimum of two openings with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding.

ii. The bottom of all openings shall be no higher than one foot above grade.

iii. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwater.

Alternatively, a registered engineer or architect may design and certify engineered openings.

2) If the requirements of subsection 1 are not met, then new construction and substantial improvement of any commercial, industrial, or the other nonresidential structure shall meet all of the following requirements:

a) Be dry flood proofed so that b) Below one foot or more above the base flood level or dry flood proofed to the elevation required by ASCE 24, whichever is greater;

~~the FPE the structure is watertight with walls substantially impermeable to the passage of water; and~~

b) The structural components are capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

c) The plans are certified by a registered professional engineer or licensed architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the Town Clerk as set forth in Sections 18.10.230(B) and 18.10.240(A)(1).

#### **18.10.330 Manufactured Homes**

All manufactured homes to be placed or substantially improved on sites shall be: A. Elevated on a permanent foundation in accordance with Section 18.10.300, and

B. Securely Aanchored to prevent ~~an adequately anchored foundation system to resist~~ flotation, collapse or ~~and~~ lateral movement, and shall be installed using methods and practices that minimize flood damage. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to other applicable anchoring requirements for resisting wind forces.

#### **18.10.340 Recreational Vehicles**

Recreational vehicles placed on sites shall:

A. Be on the site for fewer than 180 consecutive days, or

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

C. Meet the requirements of Section 18.10.330 above.

#### **18.10.350 Appurtenant Structures**

A structure which is on the same parcel of property as the principle structure and the use of which is incidental to the use of the principle structure and is not used for human habitation may be exempt from the elevation requirement of Section 18.10.300(A), provided:

A. It is used only for parking or storage;

B. It is constructed and placed on the building site so as to offer minimum resistance to the flow of floodwaters;

C. It is anchored to prevent flotation which may result in damage to other structures;

- D. All portions of the structure below the FPE must be constructed of flood-resistant materials;
- E. Service utilities such as electrical and heating equipment meet the standards of Sections 18.10.310(E) and 18.10.360;
- F. It has openings to allow free flowage of water that meet the criteria in Section 18.10.310(F);
- G. The project meets all the other requirements of this ordinance, including Section 7.

#### **18.10.360 Utilities**

- A. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems;
- B. Water wells shall be located outside the floodway and shall be protected to the FPE;
- C. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;
- D. Onsite waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding. A habitat impact assessment shall be conducted in accordance with Section 18.10.420 as a condition of approval of an onsite waste disposal system to be located in the Special Flood Hazard Area.

#### **Section 7 Standards for Habitat Protection**

The provisions of this Section shall apply in the Special Flood Hazard Area.

#### **18.10.370 Activities Allowed With a Floodplain Permit**

The following activities are allowed in the Special Flood Hazard Area without the analysis required in Section 18.10.400 or the habitat impact assessment required under Section 18.10.420, providing all other requirements of this ordinance are met, including obtaining a floodplain development permit:

- A. Repairs or remodeling of an existing structure, provided that the repairs or remodeling are not a substantial improvement or a repair of substantial damage.
- B. Expansion of an existing structure that is no greater than ten percent beyond its existing footprint, provided that the repairs or remodeling are not a substantial improvement or a repair of substantial damage. This measurement is count-ed cumulatively from the effective date of this ordinance, or September 22, 2011, whichever is earlier. If the structure is in the floodway, there shall be no change in the dimensions perpendicular to flow.
- C. Activities with the sole purpose of creating, restoring or enhancing natural functions associated with floodplains, streams, lakes, estuaries, marine areas, habitat, and riparian areas that meet Federal and State standards, provided the activities do not include structures, grading, fill, or impervious surfaces.
- D. Development of open space and recreational facilities, such as parks, trails, and hunting grounds, that do not include structures, fill, impervious surfaces or removal of more than 5% of the native vegetation on that portion of the property in the Special Flood Hazard Area.

E. Repair to onsite Septic Systems provided the ground disturbance is the minimal necessary.

#### **18.10.380 Other Activities**

All other activities not listed in Sections 18.10.360 or 18.10.370 that are allowed by the Town of Darrington Shoreline Management Program are allowed, provided they meet all the other requirements of this ordinance, including the analysis required in Section 18.10.400 and the habitat impact assessment required under Section 18.10.420, and a floodplain development permit is issued.

#### **18.10.390 Native Vegetation**

The site plan required in Section 18.10.180 shall show existing native vegetation.

A. In the riparian habitat zone, native vegetation shall be left undisturbed, except as provided in Sections 18.10.360 and 18.10.370(7)(2)(C).

B. Outside the riparian habitat zone, removal of native vegetation shall not exceed 35 percent of the surface area of the portion of the site in the Special Flood Hazard Area. Native vegetation in the riparian habitat zone portion of the property can be counted toward this requirement.

C. If the proposed project does not meet the criteria of Sections 18.10.390(A) and (B), a habitat impact assessment shall be conducted pursuant to Section 18.10.420 and, if necessary, a habitat mitigation plan shall be prepared and implemented pursuant to Section 18.10.430.

#### **18.10.400 Floodway Standards**

A. In addition to the other requirements of this ordinance, a project to develop in the floodway as delineated pursuant to Sections 18.10.140(E), 18.10.140(F), or 18.10.160(D) shall meet the following criteria:

1. The applicant shall provide a certification by a registered professional engineer demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed development would not result in any increase in flood levels during the occurrence of the base flood discharge.

2. Construction or reconstruction of residential structures is prohibited within designated floodways, except for the following. The following exceptions must still meet all other requirements in the ordinance, including Section 18.10.400(A)(1).

(a) Repairs, reconstruction, or improvements to a residential structure that do not increase the ground floor area, providing the cost of which does not exceed 50 percent of the market value of the structure either, (a) before the repair, or reconstruction is started, or (b) if the structure has been damaged, and is being restored, before the damage occurred. Any project for improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications that have been identified by a local code enforcement official, and which are the minimum necessary to assure safe living conditions, or to an historic structure, maybe excluded from the 50 percent calculations.

(b) Repairs, replacement, reconstruction, or improvements to existing farmhouses located in designated floodways and located on designated agricultural lands that do not increase the building's total square footage of encroachment and are consistent with all requirements of WAC 173-158-075;

(c) Repairs, replacement, reconstruction, or improvements to substantially damaged residential dwellings other than farmhouses that do not increase the building's total square footage of encroachment and are consistent with all requirements of WAC 173-158-076; or

(d) Repairs, reconstruction, or improvements to residential structures identified as historic structures that do not increase the building's dimensions.

B. In riverine Special Flood Hazard Areas where a floodway has not been delineated pursuant to Sections 18.10.140(E), 18.10.140(F), or 18.10.160(D), the applicant for a project to develop in the SFHA shall provide a certification by a registered professional engineer demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed development and all other past or future similar developments would not cumulatively result in an increase of flood levels during the occurrence of the base flood discharge by more than one foot.

#### 18.10.410 Compensatory Storage

New development shall not reduce the effective flood storage volume of the Special Flood Hazard Area. A development proposal shall provide compensatory storage if grading or other activity eliminates any effective flood storage volume. Compensatory storage shall:

A. Provide equivalent volume at equivalent elevations to that being displaced. For this purpose, "equivalent elevation" means having similar relationship to ordinary high water and to the best available 10-year, 50-year and 100-year water surface profiles;

B. Be hydraulically connected to the source of flooding; and

C. Provide compensatory storage in the same construction season as when the displacement of flood storage volume occurs and before the flood season begins.

D. The newly created storage area shall be graded and vegetated to allow fish access during flood events without creating fish stranding sites.

#### 18.10.420 Habitat Impact Assessment

Unless allowed under Sections 18.10.360 – 18.10.370, a permit application to develop in the Special Flood Hazard Area shall include an assessment of the impact of the project on federal, state or locally protected species and habitat, water quality and aquatic and riparian habitat. The assessment shall be:

A. A Biological Evaluation or Biological Assessment developed per 50 C.F.R. § 402.12 to initiate Federal Inter-agency consultation under Endangered Species Act section 7(a)(2); or

B. Documentation that the activity fits within Section 4(d) of the Endangered Species Act; or

C. Documentation that the activity fits within a Habitat Conservation Plan approved pursuant to Section 10 of the Endangered Species Act, where any such assessment has been prepared or is otherwise made available; or

D. An assessment prepared in accordance with Regional Guidance for Floodplain Habitat Assessment and Mitigation, FEMA Region X, 2013. The assessment shall determine if the project would adversely affect:

1. Species that are Federal, state or local listed as threatened or endangered.

2. The primary constituent elements for critical habitat, when designated, including but not limited to water quality, water quantity, flood volumes, flood velocities, spawning substrate, and/or floodplain refugia for listed salmonids.

3. Essential Fish Habitat designated by the National Marine Fisheries Service,

4. Fish and wildlife habitat conservation areas,

5. Other protected areas and elements necessary for species conservation.

#### **18.10.430 Habitat Mitigation Plan**

A. If the assessment conducted under Section 18.10.420 concludes the project is expected to have an adverse effect on water quality and/or aquatic or riparian habitat or habitat functions, the applicant shall provide a plan to mitigate those impacts, in accordance with Regional Guidance for Floodplain Habitat Assessment and Mitigation, FEMA Region X, 2013.

1. If the USFWS or NMFS issues an Incidental Take Permit under Section 10 of the ESA or a Biological Opinion under Section 7 of the ESA; then it can be considered to qualify as a plan to mitigate those impacts.

2. If the project is located in the Protected Area, the mitigation plan shall stipulate avoidance measures as are needed to ensure that there is no adverse effect during any phase of the project. No compensatory mitigation is allowed in the Protected Area.

3. If the project is located outside the Protected Area, the mitigation plan shall include such avoidance, minimization, restoration, or compensation measures so that in-direct adverse effects of development in the floodplain are mitigated such that equivalent or better habitat protection is provided for the following functions:

(a) Stormwater: Reduce flood volumes and stormwater runoff from new development by ensuring that increased volumes of stormwater reach the river at the same frequency, timing and duration as historical runoff. LID is required to be incorporated as described in Section 18.10.270(B) above.

(b) Riparian vegetation: maintain or replace riparian function by providing equivalent area, diversity, and function of riparian vegetation as currently exists on the site. Riparian retention requirements as outlined in Section 18.10.390.

(c) Hyporheic zones: No activity is allowed that interferes with the natural exchange of flow between surface water, groundwater, and hyporheic zone, however, natural hyporheic exchange may be enhanced or restored.

(d) Wetlands: Wetland function must be maintained or replaced by providing equivalent function.

(e) Large woody debris: Any large woody debris (LWD) removed from the floodplain must be replaced in kind, replicating or improving the quantity, size, and species of the existing LWD.

4. No new stream crossings are allowed outside the Protected Area unless approval has been obtained as stated in Section 18.10.430(A)(1).

B. The plan's habitat mitigation activities shall be incorporated into the proposed project. The floodplain development permit shall be based on the redesigned project and its mitigation components.

C. As required in Section 18.10.230, the Town Clerk shall not issue a certification of use or a certificate of occupancy until all work identified in the Habitat Assessment and mitigation plan has been completed or the applicant has provided the necessary assurance that unfinished portions of the project will be completed, in accordance with Section 18.10.230(B).

#### **18.10.440 Alteration of Watercourses**

A. In addition to the other requirements in this Section 7, an applicant for a project that will alter or relocate a water-course shall also submit a request for a Conditional Letter of Map Revision (CLOMR), where required by FEMA. The project will not be approved unless FEMA issues the CLOMR (which requires ESA consultation) and the provisions of the letter are made part of the permit requirements.

B. The Town Clerk shall notify adjacent communities and the Washington Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA.

C. Maintenance shall be provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is maintained ~~not diminished~~. If the maintenance program does not call for cutting of native vegetation, the system shall be oversized at the time of construction to compensate for said vegetation growth or any other natural factor that may need future maintenance.