

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Discussion of Floodplain Management Ordinance and related Development Code Amendments
DEPARTMENT:	Public Works, Planning & Community Development
PRESENTED BY:	Brian Landau, Surface Water Manager Juniper Nammi, Associate Planner
ACTION:	<input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution <input type="checkbox"/> Motion <input checked="" type="checkbox"/> Discussion <input type="checkbox"/> Public Hearing

PROBLEM/ISSUE STATEMENT:

The City is a participating community in the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP). To participate, the City must adopt and enforce a floodplain management ordinance that regulates development in the community's floodplains and that meets state and federal standards.

The NFIP has four goals: (1) provide affordable flood insurance coverage not available in the private market, (2) stimulate local floodplain management to guide future development, (3) emphasize less costly nonstructural flood control regulatory measures over structural measures, and (4) reduce Federal disaster costs by shifting the burden from all taxpayers to floodplain occupants.

In response to direction from FEMA, staff drafted a proposed Floodplain Management Ordinance (FMO) based on the Washington State Model Ordinance. The FMO consolidates the City's existing floodplain management regulations and brings the City's regulations for activities in FEMA floodplains into compliance with the Endangered Species Act (ESA). Adoption of this ordinance will maintain the community's eligibility for the National Flood Insurance Program (NFIP).

RESOURCE/FINANCIAL IMPACT:

The proposed floodplain management ordinance will have no direct financial impact to the City. City staff time will be needed to develop policies and procedures for the implementation of the proposed FMO.

RECOMMENDATION

Staff proposes Council consider the adoption of the Floodplain Management Ordinance following the public hearing scheduled for June 25, 2012.

Approved By: City Manager - *JU* City Attorney - *IS*

INTRODUCTION

In response to direction from the Federal Emergency Management Agency (FEMA) a proposed floodplain management ordinance (Attachment A) has been drafted to replace the existing floodplain regulations in Shoreline Municipal Code (SMC) Chapter 16.12 Flood Damage Prevention. The proposed FMO will bring the City's regulations for activities in FEMA designated floodplains into compliance with the Endangered Species Act (ESA) and maintain the community's eligibility for the National Flood Insurance Program (NFIP). Replacement of this chapter requires associated changes to SMC Title 20 Development Code.

The proposed floodplain management ordinance consolidates existing floodplain development regulations and adds ESA requirements. The ordinance is a city-wide nonproject action that would affect activities, uses, and developments in the regulatory floodplain. As currently identified on Flood Insurance Rate Maps (FIRMS), portions of Boeing Creek and the Puget Sound shoreline would be subject to floodplain regulations. Recent flood insurance studies for Thornton Creek and the Puget Sound shoreline are currently under FEMA review and would be subject to the floodplain management once adopted by FEMA. The City's existing floodplain regulations and the proposed floodplain management ordinance will regulate development on approximately 55 private parcels within the City

BACKGROUND

Federal flood insurance is available only in those communities that participate in the National Flood Insurance Program (NFIP). Flood insurance is required for federally backed loans to purchase or build structures located within a FEMA designated floodplain. Additionally, this insurance can be purchased for any walled or roofed building and its contents anywhere in a participating community, whether or not the building is in a floodplain.

The City is a participating community in the FEMA National Flood Insurance Program (NFIP). The NFIP has four goals: (1) provide affordable flood insurance coverage not available in the private market (2) stimulate local floodplain management to guide future development (3) emphasize less costly nonstructural flood control regulatory measures over structural measures and (4) reduce Federal disaster costs by shifting the burden from all taxpayers to floodplain occupants. To participate in the NFIP, the City must adopt and enforce a floodplain management ordinance that regulates development in the community's floodplains.

Floodplains are areas of land that are inundated by surface water during large storm events. FEMA regulates floodplains on the "base flood" or sometimes referred to as the 100-year flood. The 100-year flood has a 1 % chance of occurring in any given year. A 100-year flood may seem like a rare occurrence, but has a 26% probability of occurring over the life of a 30-year mortgage for a home located within a 100-year flood zone. FEMA floodplain maps and studies are usually performed along streams, rivers, or coastlines that are subject to development or potential development that are likely to be affected by flooding.

In July 2010, and in August 2011, the City of Shoreline received communication from FEMA directing the City to update the floodplain management regulations to bring them into compliance with the Endangered Species Act (50 CFR).

FEMA provided three options for compliance with the Reasonable and Prudent Alternative (RPA) outlined in the September 22, 2008 *Biological Opinion for the Implementation of the National Flood Insurance Program in the Puget Sound Region*:

1. Adopt an ESA compliant model ordinance; or
2. Use the Biological Opinion checklist to demonstrate that current or proposed ordinances, policies and procedures meet or exceed the RPA performance standards; or
3. Review projects for compliance with the ESA on a permit by permit basis.

In response, the City indicated that it would apply ESA requirements on a permit by permit basis (option 3) until its floodplain ordinances were amended (option 1) in June of 2012.

FEMA floodplain maps along streams, rivers, and coastlines are based on studies performed in areas with existing or potential man-made development and where there is a potential for flooding. When the City incorporated in 1995, the only designated FEMA floodplains were along portions of Boeing Creek (**Attachment B1**) and the Puget Sound shoreline. In 2009, as part of the Thornton Creek Watershed Plan to address widespread flooding in Thornton Creek, the City performed a flood insurance study and associated floodplain map of the North Branch of Thornton Creek from Ronald Bog to I-5 (**Attachment B2**).

In 2010-2011, King County performed a Coastal Flood Hazard Analysis (FIS) for the incorporated areas of King County to update the existing coastal floodplain map with a more detailed and accurate study. The flood hazard map associated with this study will be used to regulate development along the Puget Sound coastline in Shoreline, in particular the properties along 27th Ave NW (i.e. Apple Tree Lane) (**Attachment B3**). FEMA is currently reviewing both the Thornton Creek and Coastal Flood Insurance Studies. Before adoption by FEMA, a public comment process is required and will be conducted by FEMA. FEMA will notify the City and residents when it releases the Draft Flood Insurance Rate Map for public comment and review.

The City's current Floodplain Management regulations are located in SMC Chapter 15.05 Structures and Building Codes, SMC Chapter 16.12 Flood Damage Prevention, and SMC Chapter 20.80 Critical Areas Subchapter 5, Flood Hazard Areas. Adoption of the proposed floodplain regulations will include repeal of SMC Chapter 16.12, and revisions to Chapter 3.01, Chapter 15.05, and Title 20. The FMO would be adopted as SMC Chapter 13.12 Floodplain Management.

DISCUSSION

The floodplain management ordinance (**Attachment A**) is proposed in order to bring the City's existing floodplain regulations into compliance with the ESA as required under the NFIP. This floodplain ordinance proposal will accomplish a number of changes:

- It consolidates the City's existing floodplain management regulations into one chapter of the municipal code.
- The permit and development requirements for proposals within the regulatory floodplain are laid out more clearly, including the explicit requirement for separate Floodplain Development Permit and Floodplain Variance applications, where these standards were previously reviewed under the building or site development permit applications. As a result, these explicit requirements will provide property owners with more concise explanation of development regulations within the floodplains and improved permit review.
- It updates the terms and concepts as well as the data used to define and delineate the regulatory floodplain based on best available science.
- New habitat protection standards are added as required under ESA.
- Administration of the regulations will be transferred from the Planning & Community Development Director to the Public Works Director.

Associated development code updates are needed in order to ensure the existing definitions, critical area standards, and administrative procedures/criteria are consistent with the proposed floodplain management regulations and to eliminate redundancy or conflicting codes. The development code updates include changes to the following sections: Critical Areas, Definitions, and Administrative Changes. The development code updates are presented in detail in **Attachment C**.

STAKEHOLDER OUTREACH

Planning Commission:

Staff presented the proposed floodplain changes to the development code in a discussion to the Planning Commission on April 5, 2012 and a public hearing on May 3, 2012. The Planning Commission voted to approve the development code amendments on May 3, 2012. All associated public hearing Documents, minutes, and recommendation transmittal letter are in **Attachment C**.

SEPA:

A SEPA threshold Determination of Nonsignificance (DNS) was issued on April 18, 2012 for the floodplain management ordinance update. The SEPA notification was published in local papers and mailed to numerous stakeholders on the SEPA notification list (**Attachment C, Exhibit 5**).

Website:

A website with information about the proposed floodplain management chapter and associated development code changes is available to the public at <http://cityofshoreline.com/index.aspx?page=871>.

RESOURCE/FINANCIAL IMPACT

The proposed floodplain management ordinance will have no direct financial impact to the City. Some City staff time will be needed to develop policies and procedures for its implementation.

RECOMMENDATION

Staff proposes Council consider the adoption of the floodplain management ordinance following the public hearing scheduled for June 25, 2012.

ATTACHMENTS

Attachment A – Draft Floodplain management ordinance

Attachment B – FEMA Floodplain Areas Regulated by FMO (B1- Boeing Creek , B2- Thornton Creek, B3 - Puget Sound shoreline) in the City of Shoreline. (The Thornton Creek and Puget Sound shoreline maps are currently under review by FEMA and will have a public review and notification process in the future)

Attachment C – Planning Commission Public Hearing Record including Public Hearing minutes and Planning Commission Recommendation Transmittal Letter.

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF SHORELINE, WASHINGTON,
AMENDING CHAPTERS 3.01.010, 15.05.030.B, 20.20, 20.30, and 20.80, AND
REPEALING CHAPTER 16.12 OF THE SHORELINE MUNICIPAL CODE
AND CREATING CHAPTER 13.12 FLOODPLAIN MANAGEMENT.

WHEREAS, the U.S. Department of Homeland Security requires compliance with the Reasonable and Prudent Alternative outlined in the September 22, 2008 Biological Opinion for the implementation of the National Flood Insurance Program (NFIP) in the Puget Sound Region; and

WHEREAS, FEMA requires floodplain management codes to include endangered species and habitat protection; and

WHEREAS, The City is required to meet requirements of the National Flood Insurance Program, as specified in the Code of Federal Regulations (CFR), 44 CFR parts 59 and 60.

WHEREAS, Washington State laws for floodplain management are specified in Washington Administrative Code (WAC) titles 173 and 365; and

WHEREAS, 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; and

WHEREAS, the City has special flood hazard areas; and

WHEREAS, a SEPA Determination of Nonsignificance was issued on _____ in reference to proposed amendments to the municipal code; and

WHEREAS, a SEPA Determination of Nonsignificance was issued on April 16, 2012 in reference to proposed amendments to the Shoreline Municipal Code; and

WHEREAS, a public process was conducted for review and comment on proposed municipal code changes including public comment at City Council meeting on _____; and

WHEREAS, the proposed Chapter 13.12 was submitted to FEMA Region 10 for review and comment; and

WHEREAS, FEMA Region X has no comments on the proposed Chapter 13.12; and

WHEREAS, FEMA requires a Floodplain Permit; and

NOW, THEREFORE THE CITY COUNCIL OF THE CITY OF SHORELINE,
WASHINGTON, DO ORDAIN AS FOLLOWS:

Section 1. Amendment. Shoreline Municipal Code Chapter 3.01 Section 3.01.010, and Title 15 Section 15.05.030.B are amended as set forth in Exhibit 1, which is attached and incorporated herein.

Section 2. Amendment. Shoreline Municipal Code Title 20 Sections 20.20, 20.30, and 20.80 are amended as set forth in Exhibit 2, which is attached and incorporated herein.

Section 3. Repeal, New Chapter. Shoreline Municipal Code Chapter 16.2 is hereby repealed in its entirety and a new Chapter 13.12 is adopted as set forth in Exhibit 3 which is attached and incorporated herein.

Section 12. Effective Date and Publication. A summary of this ordinance consisting of its title shall be published in the official newspaper of the City. This ordinance shall take effect and be in full force on _____.

PASSED BY THE CITY COUNCIL ON _____.

Mayor

ATTEST:

APPROVED AS TO FORM:

Scott Passey
City Clerk

Ian Sievers
City Attorney

Date of Publication:

Effective Date:

EXHIBIT 1

Chapter 3.01 FEE SCHEDULES

3.01.010 Planning and development services, adding fees for Floodplain Permit and Floodplain Variance:

Type of Permit Application	2012 Fee Schedule (based on \$149.50 per hour)
BUILDING	
Building Permit	
Valuation (the total valuation is the “building permit valuations” as delineated in Section R108.3 of the International Residential Code and Section 108.3 of the International Building Code):	
\$0 – \$7,000	1-hour minimum (\$149.50)
\$7,001 – \$25,000	\$69.25 for the first \$2,000 + \$14.00 for each additional \$1,000, or fraction thereof, to and including \$25,000 (one hour minimum)
\$25,001 – \$50,000	\$391.25 for the first \$25,000 + \$10.10 for each additional \$1,000, or fraction thereof, to and including \$50,000
\$50,001 – \$100,000	\$643.75 for the first \$50,000 + \$7.00 for each additional \$1,000, or fraction thereof, to and including \$100,000
\$100,001 – \$500,000	\$993.75 for the first \$100,000 + \$5.60 for each additional \$1,000,

Attachment A

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	or fraction thereof, to and including \$500,000
\$500,001 – \$1,000,000	\$3,233.75 for the first \$500,000 + \$4.75 for each additional \$1,000, or fraction thereof, to and including \$1,000,000
\$1,000,001 +	\$5,608.75 for the first \$1,000,000 + \$3.15 for each additional \$1,000, or fraction thereof
Building/structure plan review	65% of the building permit fee
Civil plan review, commercial (if applicable)	Hourly rate, 5-hour minimum (\$747.50)
Civil plan review, residential (if applicable)	Hourly rate, 3-hour minimum (\$448.50)
Floodplain Permit	Hourly rate, 1-hour minimum (\$149.50)
Floodplain Variance	Hourly rate, 3-hour minimum (\$448.50)

Chapter 15.05 CONSTRUCTION AND BUILDING CODES

15.05.030 International Building Code amendments.

B. Section 1612.3, Establishment of flood hazard areas, is amended to read as follows:

To establish flood hazard areas, the governing body shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in ~~an~~ a scientific and engineering report entitled “~~The Flood Insurance Study for the City of Shoreline,~~” dated March 4, 1997, as amended or revised “Flood Insurance Study for King County and Incorporated Areas”, dated November 6, 2010, Flood Insurance Study Number 53033CV001B, and any revisions thereto, with ~~the~~ ~~an~~ accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with ~~and~~ any

Attachment A

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revisions thereto. The report and accompanying map are hereby adopted by reference and declared to be a part of this chapter. The Flood Insurance Study and the FIRM are on file at 17500 Midvale Ave N, Shoreline, WA 98133. ~~The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.~~

EXHIBIT 2

Chapter 20.20 Definitions

20.20.012 B definitions

~~Base Flood~~ The flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the “100-year flood.”

~~Base Flood Elevation~~ The water surface elevation of the base flood in relation to the National Geodetic Vertical Datum of 1929.

20.20.014 C definitions

~~Coastal High Hazard Area~~ An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on the FIRM as zone V1-V30, VE, or V.

20.20.020 F definitions

~~Federal Emergency Management Agency (FEMA) Floodway~~ The channel of the stream and that portion of the adjoining floodplain which is necessary to contain and discharge the base flood flow without increasing the base flood elevation more than one foot.

~~Flood~~ The temporary overflowing of water onto land that is usually devoid of surface water.

~~Flood Fringe~~ That portion of the floodplain outside of the zero rise floodway which is covered by floodwaters during the base flood, generally associated with standing water rather than rapidly flowing water.

~~Flood Hazard Areas~~ Those areas in the City of Shoreline subject to inundation by the base flood including, but not limited to, streams, lakes, wetlands and closed depressions.

~~Flood Insurance Rate Map (FIRM)~~ The official map on which the Federal Insurance Administration has delineated some areas of flood hazard.

~~Flood Insurance Study for King County.~~ The official report provided by the Federal Insurance Administration which includes flood profiles and the flood insurance rate map.

~~Flood Protection Elevation~~ An elevation which is one foot above the base flood elevation.

~~Floodplain~~ The total area subject to inundation by the base flood.

~~Floodproofing Adaptations which will make a structure that is below the flood protection elevation substantially impermeable to the passage of water and resistant to hydrostatic and hydrodynamic loads including the impacts of buoyancy.~~

~~Floodway 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.~~

~~Floodway, Zero-rise The channel of a stream and that portion of the adjoining floodplain which is necessary to contain and discharge the base flood flow without any measurable increase in flood height. A measurable increase in base flood height means a calculated upward rise in the base flood elevation, equal to or greater than 0.01 foot, resulting from a comparison of existing conditions and changed conditions directly attributable to development in the floodplain. This definition is broader than the FEMA floodway, but always contains the FEMA floodway.~~

20.20.046 S definitions

~~Substantial Improvement Any maintenance, repair, structural modification, addition or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either before the maintenance, repair, modification or addition is started or before the damage occurred, if the structure has been damaged and is being restored.~~

Chapter 20.30 Procedures and Administration

20.30.040 Ministerial decisions – Type A.

These decisions are based on compliance with specific, nondiscretionary and/or technical standards that are clearly enumerated. These decisions are made by the Director and are exempt from notice requirements.

However, permit applications, including certain categories of building permits, and permits for projects that require a SEPA threshold determination, are subject to public notice requirements specified in Table 20.30.050 for SEPA threshold determination.

All permit review procedures and all applicable regulations and standards apply to all Type A actions. The decisions made by the Director under Type A actions shall be final. The Director's decision shall be based upon findings that the application conforms (or does not conform) to all applicable regulations and standards.

Table 20.30.040 – Summary of Type A Actions and Target Time Limits for Decision, and Appeal Authority

Action Type	Target Time Limits for Decision (Calendar Days)	Section

Type A:		
1. Accessory Dwelling Unit	30 days	20.40.120, 20.40.210
2. Lot Line Adjustment including Lot Merger	30 days	20.30.400
3. Building Permit	120 days	All applicable standards
4. Final Short Plat	30 days	20.30.450
5. Home Occupation, Bed and Breakfast, Boarding House	120 days	20.40.120, 20.40.250, 20.40.260, 20.40.400
6. Interpretation of Development Code	15 days	20.10.050, 20.10.060, 20.30.020
7. Right-of-Way Use	30 days	12.15.010 – 12.15.180
8. Shoreline Exemption Permit	15 days	Shoreline Master Program
9. Sign Permit	30 days	20.50.530 – 20.50.610
10. Site Development Permit	60 days	20.20.046, 20.30.315, 20.30.430
11. Deviation from Engineering Standards	30 days	20.30.290
12. Temporary Use Permit	15 days	20.40.100
13. Clearing and Grading Permit	60 days	20.50.290 – 20.50.370
14. Planned Action Determination	28 days	20.90.025
15. Administrative Design Review	28 days	20.30.297
13. Floodplain Development Permit	30 days	13.12.700
17. Floodplain Variance	30 days	13.12.800

20.30.333 Critical area special use permit (Type C action).

A. **Purpose.** The purpose of the critical areas special use permit is to allow development by a public agency or utility when the strict application of the critical areas standards would otherwise unreasonably prohibit the provision of public services. This type of permit does not apply to flood hazard areas.

20.30.336 Critical areas reasonable use permit (Type C action).

A. **Purpose.** The purpose of the critical areas reasonable use permit is to allow development and use of private property when the strict application of the critical area standards would otherwise deny all reasonable use of a property. This type of permit does not apply to flood hazard areas.

20.30.410 Preliminary subdivision review procedures and criteria.

The short subdivision may be referred to as a short plat – Type B action.

The formal subdivision may be referred to as long plat – Type C action.

Time limit: A final short plat or final long plat meeting all of the requirements of this chapter and Chapter 58.17 RCW shall be submitted for approval within the timeframe specified in RCW 58.17.140.

Review criteria: The following criteria shall be used to review proposed subdivisions:

A. Environmental.

1. Where environmental resources exist, such as trees, streams, ravines or wildlife habitats, the proposal shall be designed to fully implement the goals, policies, procedures and standards of the critical areas chapter, Chapter 20.80 SMC, Critical Areas, and the tree conservation, land clearing and site grading standards sections.
2. The proposal shall be designed to minimize grading by using shared driveways and by relating street, house site and lot placement to the existing topography.
3. Where conditions exist which could be hazardous to the future residents of the land to be divided, or to nearby residents or property, such as flood plains, steep slopes or unstable soil or geologic conditions, a subdivision of the hazardous land shall be denied unless the condition can be permanently corrected, consistent with subsections (A)(1) and (2) of this section and Chapter 13.12 Floodplain Management.

20.30.740 Declaration of public nuisance, enforcement.

A. A Code Violation, as used in this subchapter, is declared to be a public nuisance and includes violations of the following:

1. Any City land use and development ordinances or public health ordinances;
2. Any public nuisance as set forth in Chapters 7.48 and 9.66 RCW;
3. Violation of any of the Codes adopted in Chapter 15.05 SMC;
4. Violation of provisions of Chapter 12.15 SMC, Use of Right-of-Way;
5. Any accumulation of refuse, except as provided in Chapter 13.14 SMC, Solid Waste Code;
6. Nuisance vegetation;
7. Discarding or dumping of any material onto the public right-of-way, waterway, or other public property; ~~and~~

8. Violation of any of the provisions of Chapter 13.10 SMC, Surface Water Management Code; and

9. Violations of any of the provisions of Chapter 13.12 SMC, Floodplain Management.

Chapter 20.80 Critical Areas

20.80.010 Purpose.

A. The purpose of this chapter is to establish supplemental standards for the protection of critical areas in compliance with the provisions of the Washington Growth Management Act of 1990 (Chapter 36.70A RCW) and consistent with the goals and policies of the Shoreline Comprehensive Plan in accordance with the procedures of Chapter 20.30 SMC.

B. By identifying and regulating development and alterations to critical areas and their buffers, it is the intent of this chapter to:

1. Protect the public from injury, loss of life, property damage or financial losses due to flooding, erosion, landslide, seismic events, soils subsidence or steep slope failure;

2. Protect unique, fragile and valuable elements of the environment;

3. Reduce cumulative adverse environmental impacts to water quality, wetlands, streams and other aquatic resources, fish and wildlife habitat, steep slopes and geologically unstable features;

~~4. Meet the requirements of the National Flood Insurance Program and maintain the City of Shoreline as an eligible community for Federal flood insurance benefits;~~

~~4.~~ 5. Ensure the long-term protection of ground and surface water quality;

~~5.~~ 6. Alert members of the public, including appraisers, assessors, owners, potential buyers, or lessees, to the development limitations of critical areas and their required buffers;

~~6.~~ 7. Serve as a basis for exercise of the City's substantive authority under the State Environmental Policy Act (SEPA) and the City's Environmental Procedures (Chapter 20.30 SMC, Subchapter 8); and comply with the requirements of the Growth Management Act (Chapter 36.70A RCW) and its implementing rules;

~~7.~~ 8. Establish standards and procedures that are intended to protect environmentally critical areas while accommodating the rights of property owners to use their property in a reasonable manner; and

8. 9. Provide for the management of critical areas to maintain their functions and values and to restore degraded ecosystems. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 1(A), 2000).

Subchapter 5. Flood Hazard Areas

20.80.360 Description and purpose.

A. A flood hazard area consists of the following components: floodplain; flood fringe; zero-rise floodway; and Federal Emergency Management Agency (FEMA) floodway. Special Flood Hazard Areas and Protected Areas as defined in SMC Chapter 13.12, which comprise the Regulatory Floodplain.

B. It is the purpose of these regulations to ensure that the City of Shoreline meets the requirements of the National Flood Insurance Program and maintains the City as an eligible community for Federal flood insurance benefits.

C. ~~A tsunami hazard area may be designated as a flood hazard area by the Federal or State government.~~ (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(A), 2000).

20.80.370 Classification.

Flood hazard areas shall be determined pursuant to the requirements of the Floodplain Management regulations, SMC 13.12, which include, at a minimum, all lands identified on the 100-year floodplain designations of the current Federal Emergency Management Agency (FEMA) Flood Insurance as identified in SMC 13.12. ~~after obtaining, reviewing and utilizing base flood elevations and available floodway data for a flood having a one percent chance of being equaled or exceeded in any given year, often referred to as the "100-year flood." The base flood is determined for existing conditions, and is shown on Flood Insurance Rate Maps for King County (FIRM) and incorporated areas, current version; or mapped on the King County Sensitive Areas Folio, unless a more complete basin plan including projected flows under future developed conditions has been completed and adopted by the City of Shoreline, in which case these future flow projections shall be used. In areas where the flood insurance study for the City includes detailed base flood calculations, those calculations may be used.~~ (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(B), 2000).

20.80.380 Development Limitations.

A. All development within designated flood hazard areas shall comply with Chapter 13.12 SMC, Floodplain Management, as now or hereafter amended, and are not subject to the regulations of this chapter.

~~20.80.380 Flood fringe—Development standards and permitted alterations.~~

~~A.— Development proposals shall not reduce the effective base flood storage volume of the floodplain. Grading or other activity which would reduce the effective storage volume shall be mitigated by creating compensatory storage on the site or off the site if legal arrangements can be made to assure that the effective compensatory storage volume will be preserved over time.~~

~~B.— No structure shall be allowed which would be at risk due to stream bank destabilization including, but not limited to, that associated with channel relocation or meandering.~~

~~C.— All elevated construction shall be designed and certified by a professional structural engineer licensed by the State of Washington and the design shall be approved by the City prior to construction.~~

~~D.— Subdivisions, short subdivisions, lot line adjustments and binding site plans shall meet the following requirements:~~

~~1.— New building lots shall contain no less than 5,000 square feet of buildable land outside the zero-rise floodway, and building setback areas shall be shown on the face of the plat to restrict permanent structures to this buildable area;~~

~~2.— All utilities and facilities such as stormwater facilities, sewer, gas, electrical and water systems shall be located and constructed consistent with the standards and requirements of this section;~~

~~3.— Base flood data and flood hazard notes shall be shown on the face of the recorded subdivision, short subdivision, lot line adjustment or binding site plan including, but not limited to, the base flood elevation, required flood protection elevations and the boundaries of the floodplain and the zero-rise floodway, if determined; and~~

~~4.— The following notice shall also be shown on the face of the recorded subdivision, short subdivision, lot line adjustment or binding site plan for all affected lots:~~

~~—NOTICE~~

~~—Lots and structures located within Flood Hazard Areas may be inaccessible by emergency vehicles during flood events. Residents and property owners should take appropriate advance precautions.~~

~~E.— New residential structures and improvements that include the creation of new impervious surfaces associated with existing residential structures shall meet the following requirements:~~

Attachment A

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- ~~1.—The lowest floor shall be elevated to the flood protection elevation;~~
- ~~2.—Portions of a structure which are below the lowest floor area shall not be fully enclosed. The areas and rooms below the lowest floor shall be designed to automatically equalize hydrostatic and hydrodynamic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for satisfying this requirement shall meet or exceed the following requirements:~~
 - ~~a.—A minimum of two openings on opposite walls having a total open area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;~~
 - ~~b.—The bottom of all openings shall be no higher than one foot above grade; and~~
 - ~~c.—Openings may be equipped with screens, louvers or other coverings or devices if they permit the unrestricted entry and exit of floodwaters;~~
- ~~3.—Materials and methods which are resistant to and minimize flood damage shall be used; and~~
- ~~4.—All electrical, heating, ventilation, plumbing, air conditioning equipment and other utility and service facilities shall be floodproofed to or elevated above the flood protection elevation.~~

~~F.—New nonresidential structures and substantial improvements of existing nonresidential structures shall meet the following requirements:~~

- ~~1.—Elevation.~~
 - ~~a.—Requirements for residential structures contained in subsection (E)(1) of this section shall be met; or~~
 - ~~b.—The structure shall be floodproofed to the flood protection elevation and shall meet the following requirements:~~
 - ~~i.—The applicant shall provide certification by a professional civil or structural engineer licensed by the State of Washington that the floodproofing methods are adequate to withstand the flood depths, pressures, velocities, impacts, uplift forces and other factors associated with the base flood. After construction, the engineer shall certify that the permitted work conforms with the approved plans and specifications; and~~
 - ~~ii.—Approved building permits for floodproofed nonresidential structures shall contain a statement notifying applicants that flood insurance premiums shall be based upon rates for structures which are one foot below the floodproofed level;~~

~~2.—Materials and methods which are resistant to and minimize flood damage shall be used; and~~

~~3.—All electrical, heating, ventilation, plumbing, air conditioning equipment and other utility and service facilities shall be floodproofed to or elevated above the flood protection elevation.~~

~~G.—All new construction shall be anchored to prevent flotation, collapse or lateral movement of the structure.~~

~~H.—Utilities shall meet the following requirements:~~

~~1.—New and replacement utilities including, but not limited to, sewage treatment facilities shall be floodproofed to or elevated above the flood protection elevation;~~

~~2.—Aboveground utility transmission lines, other than electric transmission lines, shall only be allowed for the transport of nonhazardous substances; and~~

~~3.—Buried utility transmission lines transporting hazardous substances shall be installed at a minimum depth of four feet below the maximum depth of scour for the base flood, as predicted by a professional civil engineer licensed by the State of Washington, and shall achieve sufficient negative buoyancy so that any potential for flotation or upward migration is eliminated.~~

~~I.—Critical facilities may be allowed within the flood fringe of the floodplain, but only when no feasible alternative site is available. Critical facilities shall be evaluated through the conditional or special use permit process. Critical facilities constructed within the flood fringe shall have the lowest floor elevated to three or more feet above the base flood elevation. Floodproofing and sealing measures shall be taken to ensure that hazardous substances will not be displaced by or released into floodwaters. Access routes elevated to or above the base flood elevation shall be provided to all critical facilities from the nearest maintained public street or roadway.~~

~~J.—Prior to approving any permit for alterations in the flood fringe, the City shall determine that all permits required by State or Federal law have been obtained. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(C), 2000).~~

~~20.80.390 Zero-rise floodway—Development standards and permitted alterations.~~

~~A.—The requirements which apply to the flood fringe shall also apply to the zero-rise floodway. The more restrictive requirements shall apply where there is a conflict.~~

~~B.—A development proposal including, but not limited to, new or reconstructed structures shall not cause any increase in the base flood elevation unless the following requirements are met:~~

~~1.—Amendments to the flood insurance rate map are adopted by FEMA, in accordance with 44 CFR 70, to incorporate the increase in the base flood elevation; and~~

~~2.—Appropriate legal documents are prepared in which all property owners affected by the increased flood elevations consent to the impacts on their property. These documents shall be filed with the title of record for the affected properties.~~

~~C.—The following are presumed to produce no increase in base flood elevation and shall not require a special study to establish this fact:~~

~~1.—New residential structures outside the FEMA floodway on lots in existence before November 27, 1990, which contain less than 5,000 square feet of buildable land outside the zero-rise floodway and which have a total building footprint of all proposed structures on the lot of less than 2,000 square feet;~~

~~2.—Substantial improvements of existing residential structures in the zero-rise floodway, but outside the FEMA floodway, where the footprint is not increased; or~~

~~3.—Substantial improvements of existing residential structures meeting the requirements for new residential structures in this title.~~

~~D.—Post or piling construction techniques which permit water flow beneath a structure shall be used.~~

~~E.—All temporary structures or substances hazardous to public health, safety and welfare, except for hazardous household substances or consumer products containing hazardous substances, shall be removed from the zero-rise floodway during the flood season from September 30th to May 1st.~~

~~F.—New residential structures or any structure accessory to a residential use shall meet the following requirements:~~

~~1.—The structures shall be outside the FEMA floodway; or~~

~~2.—The structures shall be on lots in existence before November 27, 1990, which contain less than 5,000 square feet of buildable land outside the zero-rise floodway. Structures shall be designed and situated to minimize encroachment into the zero-rise floodway.~~

~~G.—Utilities may be allowed within the zero-rise floodway if the City determines that no feasible alternative site is available, subject to the requirements of this section. Construction of sewage treatment facilities shall be prohibited.~~

~~H.—Critical facilities shall not be allowed within the zero-rise floodway except as provided in subsection (I) of this section.~~

~~I.—Structures and installations which are dependent upon the floodway may be located in the floodway if the development proposal is approved by all agencies with jurisdiction. Such structures include, but are not limited to:~~

- ~~1.—Dams or diversions for water supply, flood control, or fisheries enhancement;~~
- ~~2.—Flood damage reduction facilities, such as levees and pumping stations;~~
- ~~3.—Stream bank stabilization structures where no feasible alternative exists for protecting public or private property;~~
- ~~4.—Stormwater conveyance facilities subject to the development standards for streams and wetlands and the surface water design manual;~~
- ~~5.—Boat launches and related recreation structures;~~
- ~~6.—Bridge piers and abutments; and~~
- ~~7.—Other fisheries enhancement or stream restoration projects. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(D), 2000).~~

~~20.80.400 FEMA floodway—Development standards and permitted alterations.~~

~~A.—The requirements which apply to the zero-rise floodway shall also apply to the FEMA floodway. The more restrictive requirements shall apply where there is a conflict.~~

~~B.—A development proposal including, but not limited to, new or reconstructed structures shall not cause any increase in the base flood elevation.~~

~~C.—New residential or nonresidential structures shall be prohibited within the FEMA floodway.~~

~~D.—Substantial improvements of existing residential structures in the FEMA floodway, meeting the requirements of WAC 173-158-070, as amended, are presumed to produce no increase in base flood elevation and shall not require a special study to establish this fact. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(E), 2000).~~

~~20.80.410 Flood hazard areas—Certification by engineer or surveyor.~~

~~A.—For all new structures or substantial improvements in a flood hazard area, the applicant shall provide certification by a professional civil engineer or land surveyor licensed by the State of Washington of:~~

- ~~1.—The actual as-built elevation of the lowest floor, including basement; and~~
- ~~2.—The actual as-built elevation to which the structure is floodproofed, if applicable.~~

~~B.—The engineer or surveyor shall indicate if the structure has a basement.~~

~~C.—The City shall maintain the certifications required by this section for public inspection. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(F), 2000).~~

EXHIBIT 3

Chapter 16.12 FLOOD DAMAGE PREVENTION

Sections:

- ~~[16.12.005](#) Statutory authorization.~~
- ~~[16.12.010](#) Findings of fact.~~
- ~~[16.12.020](#) Statement of purpose.~~
- ~~[16.12.030](#) Methods of reducing flood losses.~~
- ~~[16.12.040](#) Definitions.~~
- ~~[16.12.050](#) General provisions.~~
- ~~[16.12.060](#) Administration.~~
- ~~[16.12.070](#) Provisions for flood hazard reduction—General standards.~~
- ~~[16.12.080](#) Provisions for flood hazard reduction—Specific standards.~~
- ~~[16.12.090](#) Encroachments.~~
- ~~[16.12.100](#) Critical facility.~~

~~16.12.005 Statutory authorization:~~

~~The Legislature of the state of Washington has in the city of Shoreline delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the city of Shoreline does ordain as follows:~~

~~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 flood waters;~~

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

~~E. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas. [Ord. 115 § 1.1, 1997]~~

~~16.12.010 Findings of fact.~~

~~A. The flood hazard areas of the city of Shoreline 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. 115 § 1.2, 1997]~~

~~16.12.020 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. [Ord. 115 § 1.3, 1997]~~

~~16.12.030 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, dredging 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. 115 § 1.4, 1997]~~

~~16.12.040 Definitions.~~

~~Unless specifically defined in this section, 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.~~

~~1. “Appeal” means a request for a review of the building official’s interpretation of any provision of this chapter or a request for a variance.~~

~~2. “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.~~

~~3. “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 maps always includes the letters A or V.~~

~~4. “Base flood” means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the “100-year flood.” Designation on maps always includes the letters A or V.~~

~~5. “Basement” means any area of the building having its floor subgrade (below ground level) on all sides.~~

~~6. “Breakaway wall” means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.~~

~~7. “City” means city of Shoreline.~~

~~8. “Coastal high hazard area” means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on the FIRM as zone V1-V30, VE, or V.~~

9. ~~“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, installations which produce, use, or store hazardous materials or hazardous waste.~~

10. ~~“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.~~

11. ~~“Elevated building” means, for insurance purposes, a nonbasement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.~~

12. ~~“Existing manufactured home park or subdivision” means a manufactured home park subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the adopted floodplain management regulations.~~

13. ~~“Expansion to an existing manufactured home park or subdivision” means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).~~

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

~~a. The overflow of inland or tidal waters; and/or~~

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

15. ~~“Flood insurance rate map (FIRM)” means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.~~

16. ~~“Flood insurance study” means the official report provided by the Federal Insurance Administration that includes flood profiles, the flood boundary floodway map, and the water surface elevation of the base flood.~~

17. ~~“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.~~

18. ~~“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 SMC [16.12.080\(A\)\(2\)](#).

19. "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 attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle."

20. "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.

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

22. "New manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of adopted floodplain management regulations.

23. "Recreational vehicle" means a vehicle which is:

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

24. "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. For "substantial improvement" the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

~~25. “Structure” means a walled and roofed building including a gas or liquid storage tank that is principally above ground.~~

~~26. “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.~~

~~27. “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. i. Before the improvement or repair is started; or~~

~~ii. 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.~~

~~b. The term “substantial improvement” does not, however, include either:~~

~~i. 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~~

~~ii. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.~~

~~28. “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.~~

~~29. “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. 115 § 2, 1997]~~

~~16.12.050 General provisions.~~

~~A. Lands to Which This Chapter Applies. This chapter shall apply to all areas of special flood hazards within the jurisdiction of the city.~~

~~B. Basis for Establishing the Areas of Special Flood Hazard. The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled “The Flood Insurance Study for King County, Washington” dated May 16, 1995, as amended, with accompanying flood insurance maps, as amended, are hereby adopted by reference and declared to be a part of the ordinance codified in this chapter. The flood insurance study is on file at the offices of the development services group.~~

~~C. 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. Violations 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 \$1,000 or imprisoned for not more than 30 days, or both, for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing contained in this chapter shall prevent the city of Shoreline from taking such other lawful action as is necessary to prevent or remedy any violation.~~

~~D. 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.~~

~~E. Interpretation. In the interpretation and application of this chapter, all provisions shall be:~~

- ~~1. Considered as minimum requirements;~~
- ~~2. Liberally construed in favor of the governing body; and~~
- ~~3. Deemed neither to limit nor repeal any other powers granted under state statutes.~~

~~F. 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 the city, 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 under this chapter. [Ord. 115 § 3, 1997]~~

~~16.12.060 Administration.~~

~~A. Establishment of Development Permit.~~

~~1. Development Permit Required. A development permit shall be obtained before construction or development begins within any area of special flood hazard established in SMC [16.12.050](#) (B). The permit shall be for all structures including manufactured homes, as set forth in SMC [16.12.040](#), Definitions, and for all development including fill and other activities, also as set forth in SMC [16.12.040](#), Definitions.~~

~~2. Application for Development Permit. Application for a development permit shall be made on forms furnished by the city 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 SMC [16.12.080](#)(B); and~~
- ~~d. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.~~

~~B. Designation of the Local Administrator. The development services director is appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions.~~

~~C. Duties and Responsibilities of the Local Administrator. Duties of the development services director shall include, but not be limited to:~~

~~1. Permit Review.~~

- ~~a. Review all development permits to determine that the permit requirements of this chapter have been satisfied.~~
- ~~b. 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.~~
- ~~c. Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of SMC [16.12.090](#) are met.~~

~~2. Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with SMC [16.12.050](#)(B), Basis For Establishing the Areas of Special Flood Hazard, the development services director shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in order to administer SMC [16.12.080](#), Provisions for flood hazard reduction—Specific standards.~~

~~3. Information to be Obtained and Maintained.~~

- ~~a. Where base flood elevation data is provided through the flood insurance study or required as in subsection (C)(2) of this section, obtain and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.~~
- ~~b. For all new or substantially improved floodproofed structures:
 - ~~i. Verify and record the actual elevation (in relation to mean sea level); and~~
 - ~~ii. Maintain the floodproofing certifications required in subsection (A)(2)(c) of this section.~~~~
- ~~c. Maintain for public inspection all records pertaining to the provisions of this chapter.~~

~~4. Alteration of Watercourses.~~

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

~~5. 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. Such appeals shall be granted consistent with the standards of Section 60.6 of the Rules and Regulations of the National Flood Insurance Program (44 CFR 59.76). Appeals shall be heard by the city hearing examiner in accordance with Chapter [2.15](#) SMC.~~

~~D. Variance Procedure—Conditions for Variances.~~

~~1. 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 the provisions of this chapter have been fully considered. As the lot size increases the technical justification required for issuing the variance increases.~~

~~2. 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.~~

~~3. Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.~~

~~4. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.~~

~~5. Variances shall only be issued upon:~~

~~a. A showing of good and sufficient cause;~~

~~b. A determination that failure to grant the variance would result in exceptional hardship to the applicant;~~

~~c. 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 this chapter, or conflict with existing local laws or ordinances.~~

~~6. 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.~~

~~7. 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, and otherwise complies with SMC [16.12.070](#)(A) and (B), Provisions for flood hazard reduction — General standards.~~

~~8. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. [Ord. 115 § 4, 1997]~~

~~16.12.070 Provisions for flood hazard reduction — General standards.~~

~~In all areas of special flood hazards, the following standards are required:~~

~~A. Anchoring.~~

~~1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.~~

~~2. All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over the top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).~~

~~B. Construction Materials and Methods:~~

~~1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.~~

~~2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.~~

~~3. 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.~~

~~C. Utilities:~~

~~1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;~~

~~2. 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; and~~

~~3. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.~~

~~D. Subdivision Proposals:~~

~~1. All subdivision proposals shall be consistent with the need to minimize flood damage;~~

~~2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;~~

~~3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and~~

~~4. 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).~~

~~E. Review of Building Permits. Where elevation data is not available either through the flood insurance study or from another authoritative source (SMC 16.12.060(C)(2)), 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. 115 § 5.1, 1997]~~

~~16.12.080 Provisions for flood hazard reduction — Specific standards.~~

~~In all areas of special flood hazards where base flood elevation data has been provided as set forth in SMC [16.12.050\(B\)](#), Basis for Establishing the Areas of Special Flood Hazard, or SMC [16.12.060\(C\)\(2\)](#), Use of Other Base Flood Data, the following provisions are required:~~

~~A. Residential Construction.~~

- ~~1. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above the base flood elevation.~~
- ~~2. 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:~~
 - ~~a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;~~
 - ~~b. The bottom of all openings shall be no higher than one foot above grade;~~
 - ~~c. Openings may be equipped with screens, louvers or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters.~~

~~B. Nonresidential Construction. New construction and substantial improvement of any commercial, industrial or other residential structure shall either have the lowest floor, including basement, elevated to one foot or more above the level of the base flood elevation; or, together with attendant utility and sanitary facilities, shall:~~

- ~~1. 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;~~
- ~~2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;~~
- ~~3. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural~~

~~design, specifications and plans. Such certifications shall be provided to the official as set forth in SMC [16.12.060](#)(C)(3)(b);~~

~~4. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in subsection (A)(2) of this section;~~

~~5. 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 at the base flood level will be rated as one foot below).~~

~~C. Manufactured Homes:~~

~~1. All manufactured homes to be placed or substantially improved within zones A1-A30, AH, and AE on the community's FIRM on sites:~~

~~a. Outside of a manufactured home park or subdivision;~~

~~b. In a new manufactured home park or subdivision;~~

~~c. In an expansion to an existing manufactured home park or subdivision; or~~

~~d. In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood;~~

~~shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot above the base flood elevation and be securely anchored to an adequately designed foundation system to resist flotation collapse and lateral movement.~~

~~2. Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within zones A1-A30, AH, and AE on the community's FIRM that are not subject to the above manufactured home provisions shall be elevated so that either:~~

~~a. The lowest floor of the manufactured home is elevated one foot above the base flood elevation; or~~

~~b. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately designed foundation system to resist flotation, collapse, and lateral movement.~~

~~D. Recreational Vehicles. Recreational vehicles placed on sites within zones A1-A30 AH, and AE on the community's FIRM shall either:~~

~~1. Be on the site for fewer than 180 consecutive days;~~

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~~2. 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~~

~~3. Meet the requirements of subsection (B)(3) of this section and the elevation and anchoring requirements for manufactured homes. [Ord. 115 § 5.2, 1997]~~

~~16.12.090 Encroachments.~~

~~The cumulative effect of any proposed development, where combined with all other existing and anticipated development, shall not increase the water surface elevation of the base flood more than one foot at any point. [Ord. 115 § 5.3, 1997]~~

~~16.12.100 Critical facility.~~

~~Construction of new critical facilities shall be, to the extent possible, located outside the limits of the special flood hazard area (SFHA) (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet or more above the level of the base flood elevation (100-year) 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 flood elevation shall be provided to all critical facilities to the extent possible. [Ord. 115 § 5.4, 1997]~~

Chapter 13.12 Floodplain Management

13.12.100 General

C. Findings of Fact

1. The City of Shoreline has areas that are subject to periodic inundation and channel migration which results in loss of life and property, health, and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for protection and relief from flooding and channel migration, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
2. When floodplains and watersheds are developed without appropriate care and precautions, flood heights, frequencies, and velocities increase, increasing threat to humans, damage to property, destruction of natural floodplain functions, and adverse impacts to water quality and habitat.
3. Rivers, streams, lakes, estuarine and marine areas, and their floodplains are major elements of healthy aquatic and riparian habitats and conveyance of floodwaters. If watersheds, rivers, streams, lakes, estuaries, floodplains, and other systems are not

viewed holistically as biological and geomorphologic units, serious degradation of habitat and increased flood hazards to people and human development can increase.

4. Over the years, natural processes have evolved that manage flood waters and channel flows in the most effective and efficient manner. Disruption of these processes by altering land cover, stream channels, wetlands, and other water bodies leads to increased flood hazards, loss of life and property, threats to public health, and loss of habitat.

D. Purpose

It is the purpose of this chapter to promote the public health, safety, and general welfare by managing development in order to:

1. Protect human life, health and property from the dangers of flooding;
2. Minimize the need for publicly funded and hazardous rescue efforts to save those who are isolated by flood waters;
3. Minimize expenditure of public money for costly flood damage repair and flood control projects;
4. Minimize disruption of commerce and governmental services;
5. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in the floodplain;
6. Maintain a stable tax base by providing for the sound use of flood prone areas to minimize future flood blight areas;
7. Encourage those who occupy areas subject to flooding and channel migration assume responsibility for their actions;
8. Qualify the City for participation in the National Flood Insurance Program, thereby giving citizens and businesses the opportunity to purchase flood insurance;
9. Maintain the quality of water in rivers, streams, lakes, estuaries, and marine areas and their floodplains so as to protect public water supplies, areas of the Public Trust, and wildlife habitat protected by the Endangered Species Act;
10. Retain the natural channel, shoreline, and floodplain creation processes and other natural floodplain functions that protect, create, and maintain habitat for threatened and endangered species.
11. Prevent or minimize loss of hydraulic, geomorphic, and ecological functions of floodplains and stream channels.

E. Applicability.

This chapter shall apply to the Regulatory Floodplain, which is comprised of the Special Flood Hazard Area and all Protected Areas within the jurisdiction of the City of Shoreline as defined in Section 13.12.105.

13.12.105 Definitions.

Unless specifically defined below, terms 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. The definitions in this section apply throughout this chapter unless the context clearly requires otherwise.

Adversely affect/Adverse effect: Effect that is a direct or indirect result of the proposed action or its interrelated or interdependent actions and the effects are not discountable, insignificant or beneficial. A discountable effect is extremely unlikely to occur. An insignificant effect relates to the size of the impact and should never reach the scale where a take occurs. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate an insignificant effect; or (2) expect a discountable effect to occur.

Beneficial effect: Contemporaneous positive effect without any adverse effect. In the event that the overall effect of the proposed action is beneficial, but is also likely to cause some adverse effect, then the proposed action is considered to result in an adverse effect.

Appurtenant structure: A structure which is on the same parcel of property as the principle structure to be insured and the use of which is incidental to the use of the principle structure.

Base Flood: The flood having a one percent chance of being equaled or exceeded in any given year (also referred to as the “100-year flood”). The area subject to the base flood is the Special Flood Hazard Area designated on Flood Insurance Rate Maps as Zones “A” or “V” including AE, AO, AH, A1-99 and VE.

Base Flood Elevation: The elevation of the base flood above the datum of the effective Flood Insurance Rate Map (FIRM).

Basement: Any area of the structure having its floor subgrade (below ground level) on all sides.

Channel Migration Zone: The area within the lateral extent of likely stream channel movement due to stream bank destabilization and erosion, rapid stream incision, aggradations, avulsions, and shifts in location of stream channels.

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

Development: Any manmade change to improved or unimproved real estate in the Regulatory Floodplain, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, storage of equipment or materials, subdivision of land, removal of more than 5% of the native vegetation on the property, or alteration of natural site characteristics.

Director. Public Works Director or designee.

Dry Floodproofing: Any combination of structural and nonstructural measures that prevent floodwaters from entering a structure.

Elevation Certificate: The official form (FEMA Form 81-31) used to provide elevation information necessary to ensure compliance with provisions of this chapter and determine the proper flood insurance premium rate.

ESA: Endangered Species Act

Federal Emergency Management Agency (FEMA): The agency responsible for administering the National Flood Insurance Program.

Fish and Wildlife Habitat Conservation Area: Lands needed to maintain species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. These areas are designated by the U.S. Fish and Wildlife Service.

Flood or Flooding: A general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters, and/or
2. The unusual and rapid accumulation of runoff of surface waters from any source.

Flood Insurance Rate Map (FIRM): The official map on which the Federal Emergency Management Agency has delineated both the Special Flood Hazard Areas and the risk premium zones applicable to the community.

Flood Protection Elevation (FPE): The elevation above the datum of the effective FIRM to which new and substantially improved structures must be protected from flood damage.

Flood Insurance Study: The official report provided by the Federal Emergency Management Agency that includes flood profiles, the Flood Insurance Rate Map, and the water surface elevation of the base flood.

Floodway: The channel of a stream 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 at any point.

Functionally Dependent Use: A use that must be located or carried out close to water, for example docking or port facilities necessary for the unloading of cargo or passengers, or shipbuilding and ship repair.

Historic Structure: A structure that:

1. Is listed on the National Register of Historic Places, the Washington Heritage Register, or the Washington Heritage Barn Register, or
2. Has been certified to contribute to the historical significance of a registered historic district.

Hyporheic Zone: A saturated layer of rock or sediment beneath and/or adjacent to a stream channel that contains some proportion of channel water or that has been altered by channel water infiltration.

Impervious Surface: A hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled macadam or other surfaces which similarly impede the natural infiltration of stormwater.

Lowest Floor: The lowest floor of the lowest enclosed area (including basement or crawlspace) of a structure. An unfinished or flood resistant enclosure, used solely for parking of vehicles, building access, or storage in an area other than a basement area, is not considered a structure's lowest floor, provided that such enclosure is compliant with Section 13.12.500.A.6, so that there are adequate openings to allow floodwaters into the area.

Manufactured Home: 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 attached to the required utilities. The term “manufactured home” does not include a “recreational vehicle.”

Manufactured Home Park or Subdivision: A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Native Vegetation: Plant species that are indigenous to the community’s area and that reasonably could be expected to naturally occur on the site.

Natural Floodplain Functions: The contribution that a floodplain makes to support habitat, including, but not limited to providing flood storage and conveyance, reducing flood velocities, reducing sedimentation, filtering nutrients and impurities from runoff, processing organic wastes, moderating temperature fluctuations, and providing breeding and feeding grounds, shelter, and refugia, for aquatic or riparian species.

New Construction: Structures for which the “start of construction” commenced on or after the effective date of this chapter.

NMFS: National Marine Fisheries Service

Protected Area: The lands that lie within the boundaries of the floodway, the riparian habitat zone, and the channel migration area. Because of the impact that development can have on flood heights and velocities and habitat, special rules apply in the Protected Area.

Recreational Vehicle: A vehicle,

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

Regulatory Floodplain: The area of the Special Flood Hazard Area plus the Protected Area, as defined in Section 13.12.300. The term also includes newly designated areas that are delineated pursuant to Section 13.12.300.E.

Riparian: Of, adjacent to, or living on, the bank of a river, lake, pond, ocean, sound, or other water body.

Riparian Habitat Zone: The water body and adjacent land areas that are likely to support aquatic and riparian habitat as detailed in Section 13.12.300.D.2 of this chapter.

Special Flood Hazard Area (SFHA): The land subject to inundation by the base flood. Special Flood Hazard Areas are designated on Flood Insurance Rate Maps with the letters “A” or “V” including AE, AO, AH, A1-99 and VE. The Special Flood Hazard Area is also referred to as the area of special flood hazard or SFHA.

Start of Construction: Includes substantial improvement, and means the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement that occurred before the permit’s expiration date. The actual start is either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the

installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation.

Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations, or the erection of temporary forms; nor does it include the installation on the property of accessory structures not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure: A walled and roofed building, including a gas or liquid storage tank that is principally above ground.

Substantial Damage: Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25% of the market value of the structure before the damage occurred.

Substantial Improvement: Any repair, reconstruction, rehabilitation, addition, replacement, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures that have incurred “substantial damage,” regardless of the actual repair work performed.

The term does not include any project for improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions.

Variance (Floodplain): A grant of relief from the requirements of this subchapter that permits construction in a manner that would otherwise be prohibited by this subchapter.

Water Typing: A system for classifying water bodies according to their size and fish habitat characteristics. The Washington Department of Natural Resources’ Forest Practices Water Typing classification system is hereby adopted by reference. The system defines four water types:

1. Type “S” = Shoreline: Streams that are designated “shorelines of the State,” including marine shorelines
2. Type “F” = Fish: Streams that are known to be used by fish or meet the physical criteria to be potentially used by fish.
3. Type “Np” = Non-Fish Perennial streams
4. Type “Ns” = Non-Fish Seasonal streams

Waters of the state: Includes lakes, rivers, ponds, streams, inland waters, underground water, salt waters, estuaries, tidal flats, beaches, and lands adjoining the seacoast of the state, sewers, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Zone: One or more areas delineated on the FIRM. The following zones may be used on the adopted FIRM. The Special Flood Hazard Area is comprised of the A and V Zones.

A: SFHA where no base flood elevation is provided.

A#: numbered A Zones (e.g., A7 or A14), SFHA with a base flood elevation.

AE: SFHA with a base flood elevation.

AO: SFHA subject to inundation by shallow flooding usually resulting from sheet flow on sloping terrain, with average depths between one and three feet. Average flood depths are shown.

AH: SFHA subject to inundation by shallow flooding (usually pond areas) with average depths between one and three feet. Base flood elevations are shown.

B: The area between the SFHA and the 500-year flood of the primary source of flooding. It may also be an area with a local, shallow flooding problem or an area protected by a levee.

C: An area of minimal flood hazard, as above the 500-year flood level of the primary source of flooding. B and C Zones may have flooding that does not meet the criteria to be mapped as a Special Flood Hazard Area, especially pond and local drainage problems.

D: area of undetermined but possible flood hazard.

V: The SFHA subject to coastal high hazard flooding including waves of 3' or greater in height. There are three types of V Zones: V, V#, and VE, and they correspond to the A Zone designations.

X: The area outside the mapped SFHA.

X - Shaded: the same as a Zone B, above.

13.12.200. Floodplain Administrator

A. Administrator Designation

The Public Works Director is hereby appointed as the Floodplain Administrator, to administer and implement this chapter by granting or denying floodplain development permit applications in accordance with its provisions.

B. Administrator Duties

The Director's duties shall include, but shall not be limited to the following:

1. Ensure that all development activities within the Regulatory Floodplain of the jurisdiction of the City meet the requirements of this chapter.
2. Review all floodplain development permits to determine that the permit requirements of this chapter have been satisfied.
3. Review all floodplain development permits to determine if the proposed development is located in the Protected Area. If located in the Protected Area, ensure that the provisions of Section 13.12.600 are met.

4. Review all floodplain 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, including those local, State or Federal permits that may be required to assure compliance with the Endangered Species Act and/or other appropriate State or Federal laws.
 5. Delegate to the Building Official or designee, the responsibility to inspect all development projects before, during, and after construction to ensure compliance with all provisions of this chapter, including proper elevation of the structure.
 6. Maintain for public inspection all records pertaining to the provisions of this chapter.
 7. Submit reports as required for the National Flood Insurance Program.
 8. Notify FEMA of any proposed amendments to this chapter.
 9. Cooperate with State and Federal agencies to improve flood and other technical data and notify FEMA of any new data that would revise the FIRM.
- C. Upon receipt of a permit for a development project within a floodplain, the Director shall compare the elevation of the site to the base flood elevation. A development project is not subject to the requirements of this chapter if it is located on land that can be shown to be:
1. Outside the Protected Area, and
 2. Higher than the base flood elevation.
- D. The Director shall inform the applicant that the project may still be subject to the flood insurance purchase requirements unless the owner receives a Letter of Map Amendment from FEMA.
- E. The Director shall make interpretations where needed, as to the exact location of the boundaries of the Regulatory Floodplain, the SFHA and the Protected Area where there appears to be a conflict between the mapped SFHA boundary and actual field conditions as determined by the base flood elevation and ground elevations. The applicant may appeal the Director's interpretation of the location of the boundary to the Hearing Examiner according to the procedures described in SMC 20.30.200 through 20.30.270.

13.12.300. Regulatory Data

A. Regulatory Floodplain

The Regulatory Floodplain is comprised of the Special Flood Hazard Area and all Protected Areas within the jurisdiction of City of Shoreline. The term also includes areas delineated pursuant to Section 13.12.300.E.

B. Special Flood Hazard Area

The Special Flood Hazard Area (SFHA) is the area subject to flooding by the base flood and subject to the provisions of this chapter. It is identified by the Federal Emergency Management Agency in a scientific and engineering report entitled "Flood Insurance Study for King County and Incorporated Areas " dated November 6, 2010, Flood Insurance Study Number 53033CV001B, and any revisions thereto, with an accompanying Flood Insurance Rate Map (FIRM)), and any revisions thereto, are hereby adopted by reference and declared to be a part of this chapter. The Flood Insurance Study and the FIRM are on file at 17500 Midvale Ave N, Shoreline, WA 98133.

C. Flood Hazard Data

1. The base flood elevation for the SFHAs of City of Shoreline shall be as delineated on the 100-year flood profiles in the Flood Insurance Study for King County.
2. The base flood elevation for each SFHA delineated as a “Zone AH” or “Zone AO” shall be that elevation (or depth) delineated on the Flood Insurance Rate Map. Where base flood depths are not available in Zone AO, the base flood elevation shall be considered two feet above the highest grade adjacent to the structure.
3. The base flood elevation for all other SFHAs shall be as defined in Sections 13.12.300.C.6 and 13.12.300.E.3.
4. The Flood Protection Elevation (FPE) shall be the base flood elevation plus one foot.
5. The floodway shall be as delineated on the Flood Insurance Rate Map or in accordance with Sections 13.12.300.C.6 and 13.12.300.E.4.
6. Where base flood elevation and floodway data have not been provided in Special Flood Hazard Areas, the Director shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source.

D. Protected Area

The Protected Area is comprised of those lands that lie within the boundaries of the floodway, and the riparian habitat zone, and the channel migration area.

1. In riverine areas, where a floodway has not been designated in accordance with Sections 13.12.300.C.5, 13.12.300.C.6, or 13.12.300.E.4, the Protected Area is comprised of those lands that lie within the boundaries of the riparian habitat zone, the channel migration area, and the SFHA.
2. The riparian habitat zone includes those watercourses within the SFHA and adjacent land areas that are likely to support aquatic and riparian habitat. The size and location of the riparian habitat zone is dependent on the type of water body. The riparian habitat zone includes the water body and adjacent lands, measured perpendicularly from ordinary high water on both sides of the water body:
 - a. Type S: streams that are designated “shorelines of the State:” 250 feet
 - b. Type F: fish bearing streams greater than 5 feet wide and marine shorelines: 200 feet
 - c. Type F: streams less than 5 feet wide and lakes: 150 feet
 - d. Type N: nonsalmonid bearing perennial and seasonal streams with unstable slopes: 225 feet
 - e. All other Type N: nonsalmonid bearing perennial and seasonal streams: 150 feet
3. Channel Migration Area:
 - a. The channel migration area shall be the channel migration zone plus 50 feet.
 - b. Where a channel migration zone has not yet been mapped, the provisions of Section 13.12.300.E.5 shall apply at the time of permit application.
 - c. Where more than one channel migration zone has been delineated, the Director shall use the delineation that has been adopted for other local regulatory purposes.

E. New Regulatory Data

1. All requests to revise or change the flood hazard data, including requests for a Letter of Map Revision and a Conditional Letter of Map Revision shall be reviewed by the Director.
 - a. The Director shall not sign the Community Acknowledgement Form for any requests based on filling or other development, unless the applicant for the letter documents that such filling or development complies with this chapter.
 - b. The Director shall not approve a request to revise or change a floodway delineation until FEMA has issued a Conditional Letter of Map Revision that approves the change.
2. The Director shall use the most restrictive data available for the channel migration zone, floodways, future conditions, and riparian habitat areas.
3. If an applicant disagrees with the regulatory data prescribed by this chapter, he/she may submit a detailed technical study needed to replace existing data with better data in accordance with FEMA mapping guidelines or *Regional Guidance for Hydrologic and Hydraulic Studies in Support of the Model Ordinance for Floodplain Management and the Endangered Species Act, 2010*, FEMA Region 10. If the data in question are shown on the published FIRM, the submittal must also include a request to FEMA for a Conditional Letter of Map Revision.
4. Where base flood elevation data are not available in accordance with Section 13.12.300.C, applicants for approval of new subdivisions and other proposed developments, including proposals for manufactured home parks and subdivisions greater than 50 lots or 5 acres, whichever is smaller, shall include such data with their permit applications.
5. Where floodway delineation is not available in accordance with Section 13.12.300.C, the floodway will be designated to be one-half the distance of the mapped 100-year floodplain at any point, and the prohibition on floodway development applies, unless a floodway study indicates otherwise. This provision applies to any floodplain development permit, including those for substantial improvements.
6. Where channel migration zone data are not available in accordance with Section 13.12.300.D.3, the permit applicant shall either:
 - a. Designate the entire SFHA as the channel migration zone, or
 - b. Identify the channel migration area in accordance with *Regional Guidance for Hydrologic and Hydraulic Studies in Support of the Model Ordinance for Floodplain Management and the Endangered Species Act, 2010*, FEMA Region 10.
7. All new hydrologic and hydraulic flood studies conducted pursuant to this section shall consider future conditions and the cumulative effects from anticipated future land use changes in accordance with *Regional Guidance for Hydrologic and Hydraulic Studies in Support of the Model Ordinance for Floodplain Management and the Endangered Species Act, 2010*, FEMA Region 10.

13.12.400. General Development Standards

A. Subdivisions

This section applies to all subdivision proposals, short subdivisions, short plats, planned developments, and new manufactured housing parks, as well as expansions to manufactured housing parks.

1. All proposals shall be consistent with the need to minimize flood damage.
2. The proposed subdivision should have one or more new lots in the Regulatory Floodplain set aside for open space use through deed restriction, easement, subdivision covenant, or donation to a public agency.
3. In the Regulatory Floodplain outside the Protected Area, zoning must maintain a low density of floodplain development. The density of the development in the portion of the development outside the Regulatory Floodplain may be increased to compensate for land in the Regulatory Floodplain preserved as open space in accordance with SMC Chapter 20.70.150A.
4. If a parcel has a buildable site outside the Regulatory Floodplain, the parcel shall not be subdivided to create a new lot, tract, or parcel that does not have a buildable site outside the Regulatory Floodplain. This provision does not apply to lots set aside from development and preserved as open space.
5. All proposals shall have utilities and facilities, such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.
6. All proposals shall ensure that all subdivisions have at least one access road connected to land outside the Regulatory Floodplain with the surface of the road at or above the FPE wherever possible.
7. All proposals shall have adequate drainage provided to avoid exposure to water damage.
8. The final recorded subdivision plat shall include a notice that part of the property is in the SFHA, riparian habitat zone, and/or channel migration area, as appropriate.

B. Site Design

1. Structures and other development shall be located to avoid flood damage.
 - a. If a lot has a buildable site out of the Regulatory Floodplain, whenever possible all new structures shall be located in that area.
 - b. If a lot does not have a buildable site out of the Regulatory Floodplain, all new structures, pavement, and other development must be sited in the location that has the least impact on habitat by locating the structures as far from the water body as possible, or by placing the structures on the highest land on the lot,
 - c. All structures shall be setback at least 15 feet from the Protected Area,
2. All new development shall be designed and located to minimize the impact on flood flows, flood storage, water quality, and habitat.
 - a. Stormwater and drainage features shall incorporate low impact development techniques, if technically feasible, that mimic predevelopment hydrologic conditions, such as stormwater infiltration, rain gardens, grass swales, filter strips, disconnected impervious areas, permeable pavement, and vegetative roof systems.

- b. If the proposed project will create new impervious surfaces so that more than 10 percent of the portion of the lot in the Regulatory Floodplain is covered by impervious surface, the applicant shall demonstrate that there will be no net increase in the rate and volume of the stormwater surface runoff that leaves the site or that the adverse impact is mitigated, as provided by Section 13.12.600.E and 13.12.600.F.
3. The site plan required in Section 13.12.700.D shall account for surface drainage to ensure that:
 - a. Existing and new buildings on the site will be protected from stormwater runoff and
 - b. The project will not divert or increase surface water runoff onto neighboring properties.
4. If the proposed project does not meet the criteria of Section 13.12.400.B.1 and 13.12.400.B.2, the proponent shall conduct a habitat impact assessment pursuant to 13.12.600.E and, if necessary, the proponent shall prepare and implement a habitat mitigation plan pursuant to Section 13.12.600.F.

C. Hazardous Materials

1. No new development shall create a threat to public health, public safety, or water quality. Chemicals, explosives, gasoline, propane, buoyant materials, animal wastes, fertilizers, flammable liquids, pollutants, or other materials that are hazardous, toxic, or a threat to water quality are prohibited from the Regulatory Floodplain. This prohibition does not apply to small quantities of these materials kept for normal household use. This prohibition does not apply to the continued operations of existing facilities and structures, reuse of existing facilities and structures, or functionally dependent facilities or structures.
2. If the proposed project cannot meet Section 13.12.400.C.1 of this chapter then the proponent shall conduct a habitat assessment in accordance with Sections 13.12.600.E and 13.12.600.F.

D. Critical Facilities

1. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the Regulatory Floodplain.
2. Construction of new critical facilities in the Regulatory Floodplain shall be permissible if no feasible alternative site is available, provided:
 - a. Critical facilities shall have the lowest floor elevated three feet above the base flood elevation or to the height of the 500-year flood, whichever is higher.
 - b. Access to and from the critical facility shall be protected to the elevation of the 500-year flood.
 - c. If there is no available data on the 500-year flood, the permit applicants shall develop the needed data in accordance with FEMA mapping guidelines.

13.12.500 Structure Protection Standards.

- A. In the Special Flood Hazard Area, all new structures and substantial improvements shall be protected from flood damage below the Flood Protection Elevation, including:
- Construction or placement of a new structure.

- Reconstruction, rehabilitation, or other improvement that will result in a substantially improved building.
- Repairs to an existing building that has been substantially damaged.
- Placing a manufactured home on a site.
- Placing a recreational vehicle or travel trailer on a site for more than 180 days.

B. Flood Protection Standards

1. All new structures and substantial improvements shall have the lowest floor, including basement, elevated above the FPE.
2. The structure shall be aligned parallel with the direction of flood flows where practicable.
3. The structure shall be anchored to prevent flotation, collapse, or lateral movement of the structure.
4. 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.
5. Electrical, heating, ventilation, ductwork, plumbing, and air-conditioning equipment and other service facilities shall be elevated above the FPE. Water, sewage, electrical, and other utility lines below the FPE shall be constructed to prevent water from entering or accumulating within them during conditions of flooding.
6. Fully enclosed areas below the lowest floor that are subject to flooding 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:
 - a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
 - b. The bottom of all openings shall be no higher than one foot above grade.
 - c. Openings may be equipped with screens, louvers, or other coverings or devices if they permit the automatic entry and exit of floodwaters.
7. In Zones V, V1-30 and VE, new structures and substantial improvements shall be elevated on pilings or columns so that:
 - a. 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.
 - b. The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated above the FPE.
 - c. 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).

- d. The areas below the lowest floor that are subject to flooding shall be free of obstruction.
 - e. The structure or improvement shall be located landward of the reach of mean high tide.
 - f. The use of fill for structural support of a structure or addition is prohibited.

C. Nonresidential Construction

- 1. New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall be elevated in accordance with Section 13.12.500.A.
- 2. 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. The structure is not located in Zones V, V1-30, or VE; and
 - b. Below the FPE the structure is watertight with walls substantially impermeable to the passage of water; and
 - c. The structural components are capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
 - d. 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 Director as set forth in Sections 13.12.800.A.2 and 13.12.700.E.1.a.

D. Manufactured Homes

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

- 1. Elevated on a permanent foundation in accordance with Section 13.12.500.B, and
- 2. Securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement. 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.

E. Recreational Vehicles

Recreational vehicles placed on sites shall:

- 1. Be on the site for fewer than 180 consecutive days, or
- 2. 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
- 3. Meet the requirements of Section 13.12.500.A above.

F. 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 13.12.500.A.1, provided:

1. It is used only for parking or storage;
2. It is constructed and placed on the building site so as to offer minimum resistance to the flow of floodwaters;
3. It is anchored to prevent flotation which may result in damage to other structures;
4. All portions of the structure below the FPE must be constructed of flood-resistant materials;
5. Service utilities such as electrical and heating equipment meet the standards of Sections 13.12.500.A.5 and 13.12.500.F;
6. It has openings to allow free flowage of water that meet the criteria in Section 13.12.500.A.6;
7. The project meets all the other requirements of this chapter, including Section 13.12.600.

G. Utilities

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems;
2. Water wells shall be located outside the floodway and shall be protected to the FPE;
3. 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.

13.12.600. Habitat Protection Standards

A. The provisions of this Section apply in the Regulatory Floodplain. Activities listed herein must meet all Federal, State, and City of Shoreline requirements.

B. Native Vegetation

1. The site plan required in Section 13.12.700.D shall show existing native vegetation.
2. In the riparian habitat zone, native vegetation shall be left undisturbed, except as provided in 13.12.700.C and 13.12.700.B.3.
3. 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 Regulatory Floodplain. Native vegetation in the riparian habitat zone portion of the property can be counted toward this requirement.
4. If the proposed project does not meet the criteria of Section 13.12.600.A.1 and Section 13.12.600.A.2, a habitat impact assessment shall be conducted pursuant to Section 13.12.600.E and, if necessary, a habitat mitigation plan shall be prepared and implemented pursuant to Section 13.12.600.F.

C. Floodway Standards

1. In addition to the other requirements of this chapter, a project to develop in the floodway as delineated pursuant to Sections 13.12.300.C.5, 13.12.300.C.6, or 13.12.300.E.4 shall meet the following criteria:
 - a. 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.
 - b. Construction or reconstruction of residential structures is prohibited within designated floodways, except for the following. The following exceptions must meet all other requirements in the chapter, including Section 13.12.600.B.1.a.
 - 1) Repairs, reconstruction, or improvements to a residential structure which 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 which 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, may be excluded from the 50 percent calculations.
 - 2) 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
 - 3) Repairs, reconstruction, or improvements to residential structures identified as historic structures that do not increase the building's dimensions.
2. In riverine Special Flood Hazard Areas where a floodway has not been delineated pursuant to Sections 13.12.300.C.5, 13.12.300.C.6, or 13.12.300.E.4, 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 0.01 feet.

D. Compensatory Storage

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

1. 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;
2. Be hydraulically connected to the source of flooding; and
3. Provide compensatory storage in the same construction season as when the displacement of flood storage volume occurs and before the flood season begins.

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

E. Alteration of Watercourses

1. In addition to the other requirements in this Section 13.12.600, an applicant for a project that will alter or relocate a watercourse shall also submit a request for a Conditional Letter of Map Revision (CLOMR), where required by the Federal Emergency Management Agency. 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.
2. The Director shall notify adjacent communities and the Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
3. Maintenance shall be provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is 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.

F. Habitat Impact Assessment

Unless allowed under Sections 13.12.700.B and 13.12.700.C, a permit application to develop in the Regulatory Floodplain 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 performed by a qualified professional as defined by SMC chapter 20.20.042 who is approved by the City or under contract to the City. The assessment shall be:

1. A Biological Evaluation or Biological Assessment developed per 50 CFR 402.12 to initiate Federal Interagency consultation under Endangered Species Act section 7(a)(2);
or
2. Documentation that the activity fits within Section 4(d) of the Endangered Species Act;
or
3. 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
4. An assessment prepared in accordance with *Floodplain Habitat Assessment and Mitigation Draft Regional Guidance, 2011*, FEMA Region 10. The assessment shall determine if the project would adversely affect:
 - a. Species that are Federal, state, or local listed as threatened or endangered.
 - b. The primary constituent elements for critical habitat, when designated,
 - c. Essential Fish Habitat designated by the National Marine Fisheries Service,
 - d. Fish and wildlife habitat conservation areas,
 - e. Other protected areas and elements necessary for species conservation.

G. Habitat Mitigation Plan

1. If the assessment conducted under Section 13.12.600.E 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 *Floodplain Habitat Assessment and Mitigation Draft Regional Guidance, 2011*, FEMA Region 10.
 - a. If the USFWS or NMFS issues an Incidental Take Permit under Section 10 ESA, Biological Opinion under Section 13.12.600.E, ESA; the permit can be considered to qualify as a plan to mitigate those impacts.
 - b. If the project is located outside the Protected Area, the mitigation plan shall include such avoidance, minimization, restoration, or compensation measures so that indirect adverse effects of development in the floodplain (effects to stormwater, riparian vegetation, bank stability, channel migration, hyporheic zones, wetlands, large woody debris, etc.) are mitigated such that equivalent or better habitat protection is provided.
 - c. No new stream crossings are allowed outside the Protected Area unless approval has been obtained as stated in Section 13.12.600.F.1.a.
 - d. 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.
2. 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.
3. As required in Section 13.12.700.E the Building Official 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 13.12.700.E.2.

13.12.700 Permits

A. Floodplain Development Permit

1. For all applicable development within the regulatory floodplain, a floodplain development permit shall be obtained before construction or development occurs.
2. Activities allowed by SMC Title 20 Shoreline Development Code are allowed, provided they meet all the other requirements of this chapter, including the analysis required in Section 13.12.600.B and the habitat impact assessment required under Section 13.12.600.E, a floodplain development permit is issued, and all other Federal, State, and local requirements are met.
3. A floodplain development permit is a Type A permit administered according to SMC 20.30.040, except that the Director shall approve extensions beyond 180 days following complete application and following issuance.
4. All activities within the Regulatory Floodplain must meet all applicable Federal, State, and local requirements.

B. Partial Permit Exemption

The following activities require a floodplain development permit and are allowed in the Regulatory Floodplain without the analysis required in Section 13.12.600.B or the habitat impact assessment required under Section 13.12.600.E, providing all other requirements are met, including Federal, State, and local requirements:

1. Repair or remodeling of an existing structure, if the repair or remodeling is not a substantial improvement, or a repair of substantial damage.
2. 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 counted cumulatively from September 22, 2011. If the structure is in the floodway, there shall be no change in the dimensions perpendicular to flow.
3. Activities with the sole purpose of creating, restoring, or enhancing natural functions associated with floodplains, streams, lakes, estuaries, marine areas, habitat, and riparian areas, provided the activities do not include structures, grading, fill, or impervious surfaces.
4. Development of open space and recreational facilities, such as parks, and trails, 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 Regulatory Floodplain.
5. Repair to onsite septic systems provided the ground disturbance is the minimal necessary.

C. Permit Exemptions

Activities that do not meet the definition of “development” SMC Chapter 13.12.105 are allowed in the Regulatory Floodplain and do not require a floodplain development permit. The following are examples of activities not considered development or “man-made changes to improved or unimproved real estate.”

1. Routine maintenance of landscaping that does not involve grading, excavation, or filling;
2. Removal of noxious weeds and replacement of nonnative vegetation with native vegetation;
3. Removal of hazard trees consistent with the requirements of SMC 20.50.310(1) or SMC 20.80.030(H);
4. Normal maintenance of structures, such as reroofing and replacing siding, provided such work does not qualify as a substantial improvement;
5. Normal maintenance of above ground utilities and facilities, such as replacing downed power lines and utility poles;
6. Normal street and road maintenance, including filling potholes, repaving, and installing signs and traffic signals, but not including expansion of paved areas;
7. Normal maintenance of a levee or other flood control facility prescribed in the operations and maintenance plan for the levee or flood control facility are allowed in the Regulatory Floodplain without need for a floodplain development permit. Normal maintenance does not include repair from flood damage, expansion of the prism, expansion of the face or toe or addition for protection on the face or toe with rock armor;

8. Alterations in response to emergencies which threaten the public health, safety and welfare or which pose and imminent risk of damage to private property consistent with the requirements of SMC 20.80.030(A);
9. Normal maintenance, operation or repair of publically improved recreation areas as long as any such activity does not include expansion of uses and or facilities into a previously unimproved portion of the regulatory floodplain and are consistent with the standards of Title 20.80 Critical areas, best available science or adaptive management plans as recognized by the City; and
10. Site investigative work and studies necessary for preparing land use applications.

D. Floodplain Development Permit Application

Application for a floodplain development permit shall be made on forms furnished by the Director and shall include all of the following that are applicable:

1. Assessment of the impact on those factors that contribute to increased flood hazard and degradation of habitat. If the assessment concludes that the project will cause an adverse effect outside the Protected Area, the permit will be denied unless the project impacts are mitigated (avoided, rectified or compensated).
2. A description of the extent to which a stream, lake, or other water body, including its shoreline, will be altered or relocated as a result of the proposed development.
3. Documentation that the applicant will apply for all necessary permits required by Federal, and State law. The application shall include written acknowledgment that the applicant understands that the final certification of use or certificate of occupancy will be issued only if the applicant provides copies of the required Federal, and State permits or letters stating that a permit is not required. The floodplain permit is not valid if those other permits and approvals are not obtained prior to any ground disturbing work or structural improvements.
4. Acknowledgment by the applicant that representatives of any Federal, or State unit of government with regulatory authority over the project are authorized to enter upon the property to inspect the development.
5. Site plan(s), meeting City criteria and showing:
 - a. The nature, location, dimensions, and elevations of the property in question;
 - b. Names and location of all lakes, water bodies, water-ways and drainage facilities within 300 feet of the site;
 - c. The elevations of the 10-, 50-, 100-, and 500-year floods, where the data are available. Elevation datum shall be the North America Vertical Datum of 1998 (NAVD 1988) with conversions provided as needed;
 - d. The boundaries of the Regulatory Floodplain, SFHA, floodway, riparian habitat zone, and channel migration area, delineated in accordance with Section 13.12.300;
 - e. The proposed drainage system including, but not limited to storm sewers, overland flow paths, detention facilities and roads;
 - f. Existing and proposed structures, fill, pavement and other impervious surfaces, and sites for storage of materials;

- g. All wetlands and the required buffers;
 - h. The riparian habitat zone for all development proposals within 300 feet of any stream or shoreline;
 - i. Designated fish and wildlife habitat conservation areas, and habitat areas identified for conservation or protection under state or federal or local laws or regulations, for example Endangered Species Act, Magnuson-Stevens Fishery Conservation and Management Act, Growth Management Act, Shorelines Management Act, or Priority Habitat and Species List;
 - j. Existing native vegetation and proposed revegetation.
6. If the proposed project involves grading, excavation, or filling, the site plan shall include proposed post-development terrain at one-foot contour intervals within the SFHA.
 7. If the proposed project includes a new structure, substantial improvement, or repairs to a substantially damaged structure that will be elevated, the application shall include the Flood Protection Elevation for the building site and the proposed elevations of the following:
 - a. The top of bottom floor, including basement, crawl space, or enclosure floor,
 - b. The top of the next higher floor,
 - c. The bottom of the lowest horizontal structural member (in V Zones only),
 - d. The top of the slab of an attached garage,
 - e. The lowest elevation of machinery or equipment servicing the structure,
 - f. The lowest adjacent (finished) grade next to structure,
 - g. The highest adjacent (finished) grade next to structure,
 - h. The lowest adjacent grade at the lowest elevation of a deck or stairs, including structural support,
 8. If the proposed project includes a new structure, substantial improvement, or repairs to a substantially damaged nonresidential structure that will be dry floodproofed, the application shall include the FPE for the building site and the elevation in relation to the datum of the effective FIRM to which the structure will be dry floodproofed, along with a certification by a registered professional engineer or licensed architect that the dry floodproofing methods meet the floodproofing criteria in Section 13.12.500.B.
 9. The proposed project must be designed and located so that new structural flood protection is not needed.
- E. Certificate of Occupancy
1. The Building Official shall not issue certificate of occupancy or final a building permit for a new or substantially improved structure or an addition until:
 - a. The Permittee provides a properly completed Elevation or Floodproofing Certificate showing finished construction data as required by Section 13.12.800.A;
 - b. All work identified in a mitigation plan required by Sections 13.12.600.E and 13.12.600.F has been completed according to the plan's schedule;

- c. The Permittee provides copies of all required Federal, State, and local permits noted in the permit application per Section 13.12.700.D.2;
 - d. All other provisions of this chapter have been met.
2. The Director may accept a financial guarantee, in an amount determined by the Director, to ensure completion of portions of the project following issuance of the certification of use or certificate of occupancy.

13.12.800 Administration

A. Records

The Director shall retain the following records:

1. All records pertaining to the provisions of this chapter.
2. Where base flood elevation data have been obtained pursuant to Sections 13.12.300.C and 13.12.300.E, the Director shall obtain, record, and maintain the actual “finished construction” elevations for the locations listed in Section 13.12.600.C. This information shall be recorded on a current FEMA Elevation Certificate (FEMA Form 81-31), signed, and sealed by a professional land surveyor, currently licensed in the State of Washington.
3. For all new or substantially improved dry floodproofed nonresidential structures, where base flood elevation data has been obtained pursuant to Sections 13.12.300.C and 13.12.300.E, the Director shall obtain, record and maintain the elevation (in relation to the datum of the effective FIRM) to which the structure was floodproofed. This information shall be recorded on a current FEMA Floodproofing Certificate (FEMA Form 81-65), professional engineer, currently licensed in the State of Washington.

B. Appeals

Any requirement, decision, or determination made by the Director in the enforcement or administration of this chapter is appealable according to the procedures described in SMC Chapters 20.30.200 through 20.30.270.

C. Floodplain Variance

1. Each floodplain variance pertains to a physical piece of property. The variance is not personal in nature and is not based on the inhabitants or their health, economic, or financial circumstances.
2. The Director shall review and issue variances from the requirements of this chapter.
3. Upon consideration of the following criteria and the purposes of this chapter, the Director may attach such conditions to the granting of the floodplain variance as deemed necessary to further the purposes of this chapter.
4. Criteria
 - a. No floodplain variance shall be granted to the requirements of this chapter unless the applicant demonstrates that:
 - 1) The development project cannot be located outside the Regulatory Floodplain;
 - 2) An exceptional hardship would result if the variance were not granted;
 - 3) The relief requested is the minimum necessary;

- 4) The applicant's circumstances are unique and do not represent a problem faced by other area properties;
 - 5) If the project is within a designated floodway, no increase in flood levels during the base flood discharge would result;
 - 6) The project will not adversely affect features or quality of habitat supporting local, state or federally protected fish or wildlife;
 - 7) There will be no additional threat to public health, safety, beneficial stream or water uses and functions, or creation of a nuisance;
 - 8) There will be no additional public expense for flood protection, lost environmental functions, rescue or relief operations, policing, or repairs to streambeds, shorelines, banks, roads, utilities, or other public facilities; and
 - 9) All requirements of other permitting agencies will still be met, including the ESA.
- b. In reviewing applications for a floodplain variance , the Director shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter, and:
- 1) The danger to life and property due to flooding or erosion damage;
 - 2) The danger that materials may be swept onto other lands to the injury of others;
 - 3) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - 4) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;
 - 5) The susceptibility of the proposed facility and its contents to flood or erosion damage and the effect of such damage on the individual owner;
 - 6) The availability of alternative locations for the proposed use which are not subject to flooding or channel migration and are not in designated fish and wildlife habitat conservation areas;
 - 7) The relationship of the proposed use to the comprehensive plan, growth management regulations, critical area regulations, the shoreline management program, and floodplain management program for that area;
 - 8) 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;
 - 9) The potential of the proposed development project to destroy or adversely affect a fish and wildlife habitat conservation area or create an adverse effect to federal, state or locally protected species or habitat; and
 - 10) The potential of the proposed development project to affect, or be affected by, channel migration.

- c. A floodplain variance requested in connection with restoration of a historic site, building, or structure may be granted using the following criteria:
 - 1) The repair or rehabilitation is the minimum necessary to preserve the historic character and design of the site, building or structure; and
 - 2) The repair or rehabilitation will not result in the site, building, or structure losing its historic designation.
- d. A floodplain variance may be requested for new construction, substantial improvements, and other development necessary for the conduct of functionally dependent uses provided:
 - 1) There is good and sufficient cause for providing relief;
 - 2) The variance does not cause a rise in the 100 year flood level within the regulatory floodway;
- e. A floodplain variance to the provisions of Section 13.12.500 of this chapter may be issued for a structure on a small or irregularly shaped lot contiguous to and surrounded by lots with existing structures constructed below the FPE, providing the other variance criteria are met. The applicant for such a variance shall be notified, in writing, that the structure (i) will be subject to increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and (ii) such construction below the FPE increases risks to life and property. Such notification shall be maintained with a record of all variance actions.

D. Violations

Any activity or action caused or permitted to exist in violation of this chapter is a threat to public health, safety, and welfare, and is declared and deemed a public nuisance. Such violations are subject to enforcement under SMC 20.30.720 through 20.30.790. No development shall be undertaken or placed in the areas regulated by this chapter without full compliance with the terms of this chapter and other applicable regulations of the City of Shoreline.

E. Interpretation

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

- 1. Considered as minimum requirements;
- 2. Liberally construed in favor of the City; and,
- 3. Deemed neither to limit nor to repeal any other powers granted under State statutes.

F. Abrogation and Greater Restrictions

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, deed restrictions, codes, or ordinances. However, where this chapter and another code, ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

G. Warning and Disclaimer of Liability

The degree of property and habitat protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods and movement of channels outside of mapped channel migration areas can and will occur on rare

occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the regulated areas or development permitted within such areas will be free from flood or erosion damage. This chapter shall not create liability on the part of City of Shoreline or any officer or employee thereof for any damage to property or habitat that result from reliance on this chapter or any administrative decision lawfully made hereunder.

H. Severability

The provisions and sections of this chapter shall be deemed separable and the invalidity of any portion of this chapter shall not affect the validity of the remainder.

Attachment C

Attachment D

ATTACHMENT B1. Boeing Creek FEMA Floodplain Regulated by Floodplain Management Ordinance



Legend

City Boundary

Tax Parcel

FMO Regulated Flood Zone

A Zone

High Risk Flood Area
Areas with a 1 % or
greater chance of flooding
(no base flood elevations
determined)

Unregulated Flood Zone

X ZONE

**Moderate to Low Risk
Flood Area**

0 105 210 420 630 840 Feet



No warranties of any sort,
including accuracy,
fitness, or merchantability,
accompany this product.

**Data Source: FEMA 1995 FIRM
King County**

**High Risk Flood Areas subject to Floodplain Management Ordinance (FMO)
Along Boeing Creek**

000088

Date: 5/17/2012

ATTACHMENT B2. Thornton Creek (Ronald Bog to N 163rd) FEMA Floodplain Regulated by Floodplain Management



Legend

City Boundary

Tax Parcel

FMO Regulated Flood Zone

AH ZONE

High Risk Flood Area
Areas with a 1 % or greater chance of shallow flooding in the form of a pond, with an average depth of 1-3 ft. Base flood elevations determined.

AE ZONE

High Risk Flood Area
Areas with a 1 % or greater chance flooding. Base flood elevations determined.

Unregulated Flood Zone

X ZONE

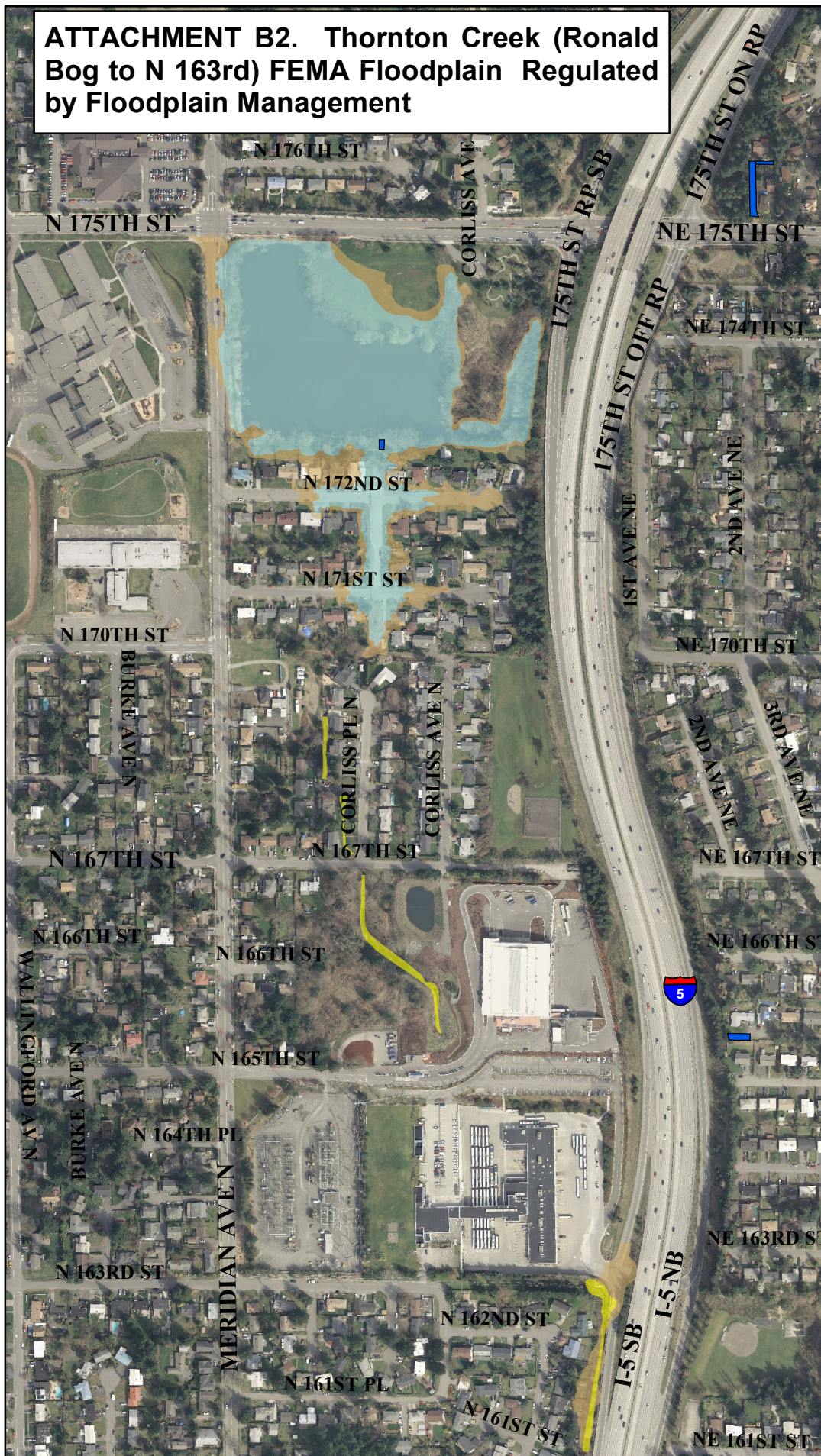
Moderate to Low Risk Area

0 85 170 340 510 680 Feet



No warranties of any sort, including accuracy, fitness, or merchantability, accompany this product.

Data Source: Coastal Flood Hazard Analysis of Puget sound for the Incorporated Areas of King County, WA Sept. 2011



**High Risk Flood Areas subject to Floodplain Management Ordinance
Along Thornton Creek**

000089

Date: 5/17/2012

ATTACHMENT B2. Thornton Creek (N 163rd to I-5) FEMA Floodplain Regulated by Floodplain Management

N 163RD ST
N 162ND ST
N 161ST PL
N 160TH ST
N 159TH ST
N 158TH ST
N 156TH PL
N 155TH ST
N 154TH ST
N 153RD ST
N 150TH ST
N 149TH LN

SUNNYSIDE AVENUE
CREEK
CORLISS AVENUE
MERIDIAN AVENUE
1ST AVENUE NE
3RD AVENUE NE
4TH AVENUE NE

NE 163RD ST
NE 162ND ST
NE 161ST ST
NE 159TH ST
NE 158TH ST
NE 157TH ST
NE 156TH ST
NE 155TH ST
NE 152ND ST
NE 151ST ST

I-5
I-5 SB
I-5 NB



☐ Tax Parcel

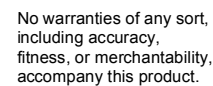
AE ZONE

A ZONE

Unregulated Flood Zone

X ZONE

0 85 170 340 510 680 Feet



Data Source: Flood Insurance Mapping Study for North Branch Thornton Creek (Ronald Bog to I-5). City of Shoreline 2009

ATTACHMENT B3. Puget Sound Shoreline- FEMA Floodplain



Legend

City Boundary

Tax Parcel

FMO Regulated Flood Zone

VE ZONE

High Risk Coastal Zone
Coastal Area with a 1 % or greater chance of flooding and an additional hazard associated with storm waves
Base flood elevations determined

AE ZONE

High Risk Flood Area
Areas with a 1 % or greater chance of flooding
Base flood elevations determined

Unregulated Flood Zone

X ZONE

Moderate to Low Risk Area

0 30 60 120 180 240 Feet



No warranties of any sort, including accuracy, fitness, or merchantability, accompany this product.

Data Source: Coastal Flood Hazard Analysis of Puget sound for the Incorporated Areas of King County, WA Sept. 2011

High Risk Flood Areas subject to Floodplain Management Ordinance Along the Puget Sound Shoreline (27th Ave NW)

Date: 5/17/2012

DRAFT

These Minutes Subject to
June 7th Approval

CITY OF SHORELINE

**SHORELINE PLANNING COMMISSION
MINUTES OF REGULAR MEETING**

May 3, 2012
7:00 P.M.

Shoreline City Hall
Council Chamber

Commissioners Present

Chair Moss
Vice Chair Esselman
Commissioner Craft
Commissioner Maul
Commissioner Montero
Commissioner Wagner

Staff Present

Rachael Markle, Director, Planning & Community Development
Steve Szafran, Associate Planner
Miranda Redinger, Associate Planner
Juniper Nammi, Associate Planner
Brian Landau, Surface Water Manager
Jessica Simulcik Smith, Planning Commission Clerk

Commissioners Absent

Commissioner Scully

Others Present

CALL TO ORDER

Chair Moss called the regular meeting of the Shoreline Planning Commission to order at 7:00 p.m.

ROLL CALL

Upon roll call by the Commission Clerk the following Commissioners were present: Chair Moss, Vice Chair Esselman, and Commissioners Craft, Maul, Montero and Wagner. Commissioner Scully was absent.

APPROVAL OF AGENDA

The agenda was approved as presented.

DIRECTOR'S COMMENTS

Ms. Markle announced that the City is in the process of hiring a new police chief. An open house will be held on May 8th at 5:30 p.m. for members of the community to meet the candidates.

APPROVAL OF MINUTES

The minutes of the April 5, 2012 regular meeting were approved as amended.

GENERAL PUBLIC COMMENT

Laethan Wene, Shoreline, said he would like the City to provide more wheelchair access.

PUBLIC HEARING ON DEVELOPMENT CODE AMENDMENT RELATED TO FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOODPLAIN MANAGEMENT ORDINANCE

Chair Moss reviewed the rules and procedures for the public hearing and then opened the public hearing.

Staff Presentation

Ms. Nammi reminded the Commission that on April 5th, staff presented proposed amendments to Title 20 of the Shoreline Municipal Code (SMC) that are required in conjunction with the proposed Floodplain Management Ordinance (FMO) that would replace the current SMC 16.12 regarding flood damage prevention. She briefly reviewed the changes to SMC 20 as follows:

- **Definitions.** Fourteen definitions that are obsolete or duplicate would either be deleted or moved to the new FMO. One definition having to do with flood hazard areas would be modified.
- **Administrative Changes.** Miscellaneous administrative/procedure development regulations contained in SMC 20.30 would be modified to officially create a Floodplain Development Permit and Floodplain Variance. References would also be added related to subdivisions and code violations. In addition, the outdated standards that were under the Flood Hazard Section of the Critical Areas Ordinance (CAO) would be removed and new language would be inserted to indicate that flood hazard areas are considered critical areas, but look to the new FMO for the standards that would apply.

Ms. Nammi advised that maps showing the currently mapped flood hazard areas in Shoreline were provide for information purposes. The maps include the Puget Sound shoreline, Boeing Creek and the North Branch of Thornton Creek. She explained that the regulations would apply to any areas in Shoreline that are mapped and added to the FEMA Flood Insurance Rate Maps (FIRM) in the future. She further explained that the Shoreline Master Program (SMP) applies to the Puget Sound shoreline, and the Critical Areas Ordinance (CAO) applies to streams, wetlands, steep slopes, fish and wildlife habitat areas, etc. There is quite a bit of overlap between the three (SMP, FMO and CAO) sections of regulations. While not the focus of the public hearing, Ms. Nammi provided two examples to illustrate how the existing CAO and SMP and the new FMO regulations would be applied:

- The “partial exemption” provision in the CAO would allow a bulkhead to be replaced along the Puget Sound Shoreline and a retaining wall with stairs to be constructed. The SMP would also allow the bulkhead to be replaced, but a Exemption Application would be required to demonstrate the

proposal meets the standards of the SMP. Stairs with a maximum footprint of 200 square feet would be allowed closer than the 20-foot setback on 27th Avenue Northwest. The proposed FMO would require a Floodplain Development Permit. This review was previously done as part of the building permit. The project is small enough that it would not be considered a substantial improvement or a structure under the proposed FMO. Therefore, it would be subject to general standards, but not the structure protection standards. Habitat protection standards would apply because there is critical habitat identified along the Shoreline. A hydraulic project approval would also be required from the State.

- If a substantial improvement in a flood hazard area creates new footprint area, it would have to follow the CAO; and in most cases, the existing houses are closer than the current regulations would allow. These existing non-conforming structures could be rebuilt or horizontally added onto, but they could not get any closer to the critical area. The FMO would require a Floodplain Development Permit. The project would have to be evaluated under all the sections of the FMO, including structure and habitat protection. An existing non-conforming structure could be reconstructed, but it would have to be brought into compliance with the structure protection standards. The location can stay the same.

Questions by the Commission

Commissioner Wagner noted that the desk packet contains a comment letter from the Paramount Park Neighborhood Group, which the City received today. Ms. Simulcik Smith agreed to enter the comment letter into the record as an additional exhibit. The Commission agreed it would also be appropriate to take a short break at some point in the meeting to review the letter.

Commissioner Wagner asked staff to respond to the letter the Commission received from Molly Lawrence of the law firm, Gordon Derr LLP, which suggests that FEMA, the National Oceanic and Atmospheric Administration (NOAA), and the National Marine Fisheries Service are overstepping their authority. Mr. Landau said he cannot speak to the legal arguments contained in the letter, but he is knowledgeable about the floodplain regulations and what the City is required to do. He expressed his belief that the proposed FMO is in compliance with what has been strongly recommended by FEMA and the National Marine Fisheries Service, as well as the regulations relevant to Shoreline's standing as a participating community in the National Flood Insurance Program. If the City does not stay updated with FEMA's floodplain regulations, they would not be eligible for any FEMA hazard funding.

Commissioner Wagner summarized that the letter cautions the City against overstepping their bounds in regard to the proposed FMO, and staff has affirmed that nothing the City is proposing would be contrary to the position stated in the letter. Ms. Nammi agreed with Commissioner Wagner's summary. She said the law firm was notified of the proposed amendment, and Ms. Lawrence did not respond with any specific comments and concerns regarding the proposed ordinance.

Vice Chair Esselman asked if the FMO would apply to Boeing Creek. Ms. Nammi clarified that the regulations would apply citywide. The City will look to the FEMA FIRMs to see where the FMO would actually apply. The maps include the Puget Sound Shoreline, Boeing Creek, and the North Branch of Thornton Creek. The data and boundaries related to the Puget Sound Shoreline were recently updated.

The map for the North Branch of Thornton Creek is newly proposed and the map for Boeing Creek has not been updated. She noted that FEMA has not officially accepted the maps for either Boeing Creek or the North Branch of Thornton Creek, however they will be the effective maps in the interim because they are the most current available data.

Vice Chair Esselman asked if Boeing Creek would still be considered part of the floodplain in light of all the improvements that have been made in recent years. Mr. Landau answered affirmatively. He said the City is currently working on a stormwater basin plan for Boeing Creek, which will also update the approximate floodplain within the creek basin. He said he will work with FEMA to determine how this new information could be used to improve the level of accuracy of the existing FEMA map. Vice Chair Esselman asked how the homeowners along Boeing Creek would be impacted in the meantime. Ms. Nammi said, in most cases, the structures are well outside of the mapped flood area. If there is some question about where that elevation actually falls, property owners can go through a process called a Letter of Map Amendment (LOMA) to document that their house is not actually in the flood plain. At least two property owners along Boeing Creek have already completed this documentation. However, a Floodplain Development Permit would still be required in order for the City to confirm that the proposal is not in the floodplain. In most places along Boeing Creek, the slope and stream buffers have a much greater level of protection than the regulatory floodplain.

Commissioner Wagner said it appears that the City is responsible for submitting information to FEMA to allow them to update their maps. She asked if other parties would also be allowed to submit information. If so, is there a formal process for this to occur? Mr. Landau answered that it is a City-driven process. He explained that the City could sponsor a study to delineate a floodplain, and then the study would be submitted to FEMA to update the current maps. The City could also develop a floodplain and create regulations that are stricter than those of FEMA.

Commissioner Craft pointed out that only about eight structures along Boeing Creek would be impacted by the proposed FMO. Although the current maps are not detailed enough, it is fairly clear that the structures are not within the floodplain. He suggested it may be too onerous to require property owners who want to remodel their homes to obtain a permit and meet all of the requirements of the new regulation until the maps have been updated. Ms. Nammi said that development on any parcel that is in a regulatory floodplain requires a Floodplain Development Permit to verify that the project is not subject to the floodplain regulations. When it is fairly clear that a project is outside of the regulatory floodplain, the application would be very basic. Again, she pointed out that this is a FEMA requirement.

Mr. Landau said that within the next few years, the City will develop an approximate floodplain elevation for Boeing Creek. This might not meet FEMA's standard as a floodplain elevation, but it would verify the location of the floodplain. He said the current floodplain maps for Boeing Creek are erroneous because they were hand drawn in the 80s and 90s using 20-foot contour interval maps. New technology will allow for a more detailed map.

Commissioner Craft said he would prefer that the maps be updated prior to final approval of the FMO. Ms. Nammi pointed out that updated maps would not change the permit requirement. Because most of the properties abut the stream, some portion of the property would fall within the regulatory floodplain. Commissioner Craft agreed but noted that most of the structures would not fall within the floodplain.

Ms. Nammi said the City has made a commitment to FEMA to adopt the FMO by the end of June. While they could request an extension of the deadline, staff anticipates the floodplain elevations for Boeing Creek would be updated in the near future and the current regulations are the same in this respect.

Vice Chair Esselman asked if the current maps would be approved as part of the FMO. Ms. Nammi clarified that the maps were provided for information only, and would not be adopted as part of the FMO. The maps provide the best available information for the mapped flood areas, so FEMA considers them to be “current effective maps.”

Ms. Nammi reminded the Commission that the draft FMO (SMC 13.12) starting on Page 31 of the Staff Report was included for the Commission’s information only. It will replace the information coming out of the CAO, but it is not final. This document will be finished and taken to the City Council for final approval in June. Chair Moss pointed out that SMC 13.12.100(C)(7) should be modified by adding the word “to” before “assume.” Ms. Nammi agreed to make this change.

Chair Moss asked staff to explain what is meant by the term “other local regulatory purposes” as used in SMC 13.12.300(D)(3)(c). Mr. Landau said it would be a stretch to say that any stream in the City has a channel migration area because they tend to be on much larger rivers. This language was part of the FEMA model ordinance, but it would not really be applicable to Shoreline. Thornton Creek is confined to its current location and is not likely to migrate out of its current channel.

Chair Moss referred to SMC 13.12.300(E)(6) and (E)(7) and noted that, typically, when the City references non-city documents, they also include language to make it clear that future amendments to the documents would also be applicable. Ms. Nammi agreed to research this issue for Council.

Chair Moss asked if the City has a definition for “critical facilities,” as used in SMC 13.12.400(D). Ms. Nammi said that this term is defined in SMC 13.12.105(H). Chair Moss also asked if the term “500-year flood” is defined. Ms. Nammi said SMC 12.12.105(RR) defines the various types of special flood hazard areas. She specifically noted that Items B, C, and X reference types of 500-year flood areas. She noted that the City has a Type X flood hazard area along Boeing Creek, and another 500-year-flood area is mapped along the southern part of 27th Avenue Northwest. Mr. Landau added that some are located along Thornton Creek, as well. He explained that the new FEMA mapping guidelines require the City to delineate a 500-year-flood plan, specifically for the “critical facility” part of the code. However, it would not affect flood insurance for homeowners.

Public Testimony

Janet Way, Shoreline, said she was speaking on behalf of Paramount Park Neighborhood Group, which is a long-standing group advocating for the benefits of their neighborhood, particularly Little’s Creek and the Paramount Park Neighborhood. Ms. Way referred to a letter she wrote to the City to express her interest in making sure that Little’s Creek is recognized in the FEMA floodplain mapping. She asked if it would be possible for the City to contract a study for Little’s Creek where there have been numerous flooding incidents over the years. She referred to a packet of information she gave to the Sound Transit Board when she testified to them regarding the light rail station that will likely end up in the

neighborhood. She asked that this information be entered into the City's record. *(She agreed to submit copies of her exhibits to staff at a later time.)*

Ms. Way specifically provided a photograph taken from Paramount Park, which shows Little's Creek overtopping the culvert. She explained that the 148th path is widely used by commuters who walk and ride their bikes to the bus stations near the freeway. She said there have been numerous other situations of flooding in the neighborhood, as well. She noted that a City Councilmember's backyard near Little's Creek was completely flooded in 2007. She summarized that she would like the FMO to be amended at some point to address Little's Creek. While she recognized it could probably not be added before the FMO is adopted, she would like the City to at least identify a process for adding it at some point in the future. It's a very important basin, and it has the best reach of creek in the entire City.

Ms. Way asked that the City's 2004 Thornton Creek and Westlake Watershed Basin Characterization Report be added to the FMO by reference. She noted that this report includes maps of the entire Thornton Creek Watershed, and it also provides a map that refers to the geology of the area. She explained that the brown streak on the map near Paramount Park identifies a liquefaction zone. There is also a steep slope along the basin where landslides have occurred over the years. These slopes should also be identified in the FMO.

Ms. Way said the draft FMO does not include any mention of trees. She suggested that SMC 13.12.400(B)(2)(a) be amended by adding, "and preserve and retain existing trees wherever possible, especially conifers." She stated that the reason they have flooding downstream is because there is a lot of impervious surface. She noted that more conifers equals less flooding.

Commissioner Wagner questioned if it is possible for the Commission to accept and incorporate an entire report by reference that they have not been able to peruse and contemplate. Mr. Szafran said the characterization report is a current City document. Ms. Nammi emphasized that the City Council will review and take action on the proposed FMO, and the Commission is not being asked to provide a recommendation regarding the document. Ms. Way's request to add additional language related to tree preservation could be presented to the City Council for consideration. Ms. Nammi also clarified that while the State Environmental Protection Act (SEPA) Checklist (Item B.1.d) indicates that there are no steep slopes in the Thornton Creek Basin, she meant to refer to the North Branch of Thornton Creek, since that is the one that has flood mapping. Regardless, the information simply illustrates the need for the updated standards and that the regulations would have a net benefit for the environment, in her professional opinion.

Commissioner Wagner said she does not believe it is appropriate for the Commission to incorporate an entire document or digital photographs that have not been reviewed by the Commission as part of the hearing. However, it would be acceptable to acknowledge that the report is a City document that staff has contemplated and has sufficient knowledge of. Chair Moss suggested, because the photographs are not City-generated documents, it would be more appropriate to accept the hard copies provided by Ms. Way than a digital copy that is provided to staff at a later time. The photographs were entered into the record as Exhibit #8.

Mr. Landau noted that the future studies and map updates requested by Ms. Way would have to be discussed by the City Council and identified as future work items. Commissioner Moss said that rather than adding language about future studies, the Commission could forward a recommendation to the City Council that additional mapping or studies should be done in the future as a separate process. Ms. Nammi agreed that updating flood data is a separate process per the City Council's direction.

Robert Allen, Shoreline, pointed out that the proposed documents talk about the Boeing Creek Basin rather than just specifically Boeing Creek. He reminded the Commission that there are other creeks (Storm and Blue Heron) in the Boeing Creek Basin where there is severe erosion that threatens not only habitat, but also the foundation of private residences. Floodwaters come through these locations, spreading out over a larger floodplain or going down a channel that eats away the bank, causing it to slough into the stream and wash out into Puget Sound. He noted that aerial photographs show a huge plume of dirt, slime and mud, as well as a huge interruption in the kelp bed. Rather than confining the ordinance to only Boeing Creek where the houses sit 50 feet back, they should also address Storm Creek where soils are actually sloughing away from the foundations of the houses. He asked that the City correct this omission before the ordinance is adopted because Storm and Heron Creeks are threatening both habitat and private property. If the Commission sends a recommendation to the City Council based on missing data, the lines for controversy will be opened. He agreed with Ms. Way that there should be a process for addressing community concerns before the proposed Development Code amendments and the draft FMO are presented to the City Council for review and approval. He summarized that property owners are very concerned about their homes and the nearby habitat.

Mr. Landau explained that Storm Creek is not part of the Boeing Creek Basin. It is a separate basin that drains to Puget Sound, and it does not have a FEMA regulatory floodplain map. The proposed changes to the Development Code and the new FMO would not apply to any of the properties above or along that creek. There other regulations (i.e. steep slopes, stream habitat, etc.) to protect the environment of streams such as Blue Heron and Storm Creeks. The proposed code language specifically speaks to FEMA regulatory floodplains that have been mapped and have specific studies to indicate potential flood risk to life and structures that are in areas that become inundated by flood waters. Ms. Nammi explained that passing an update to the FMO would not close or otherwise end the process that studies and updates the FEMA maps. This is an entirely separate process. She emphasized that the FMO is a citywide ordinance that would apply to any new flood areas that are identified as the data is updated.

Richard Kink, Shoreline, said he was present to speak on behalf of the Richmond Beach Preservation Association. He said he understands that the public hearing is specifically about consolidating code language. However, he was present to express concern about the FEMA FIRMs. He noted that because the maps were not available until April 20th, the association did not have a lot of time to research and prepare a response. He said he recently spoke with a Department of Ecology (DOE) representative who stated that any previous LOMAs to exclude a property from a floodplain is no longer applicable under the new maps. He said he also obtained an enlarged map of 27th Avenue Northwest from King County, which shows a velocity elevation of 22 feet for the shoreline along 27th Avenue Northwest, which means that a velocity driven wave would be twice as high as the normal difference between low tide and an extreme high tide.

Mr. Kink said the Association has some serious concerns about the maps, which are tentative and still have to be approved. He noted there are eight homes that would be seriously affected as far as future remodeling, rebuilding, etc. He said some of the properties have been developed since almost the turn of the century, and there has been no inundation, even when the Columbus Day Storm of 1999 occurred. He said the association has questions about inundation versus soil saturation as it relates to flooding issues, and he looks forward to working with the City to address these issues in the future.

Staff displayed a map contained in the Thornton Creek Basis Characterization Report on the screen so the Commission could review the information that was referenced earlier by Ms. Way. The map was entered into the record as Exhibit #9. Ms. Nammi used the map to explain that the new floodplain map for the North Branch of Thornton Creek starts at Ronald Bog and extends to where the stream goes under Interstate 5. She said there is currently no flood study for Little's Creek or Hamblin Creek, which is mostly piped. She also identified the steep slope area that Ms. Way referred to. Mr. Landau added that these separate, small basins drain directly into Puget Sound. Therefore, they are addressed in the Puget Sound Drainage Characterization Report rather than the Boeing Creek Basin Characterization Report. He used a map to identify the location of both of the creeks for the Commission's information.

The Commission took some time to review the letter they received from the Paramount Park Neighborhood Group.

Ms. Nammi emphasized that the two proposed floodplain maps (Coastal and the North Branch of Thornton Creek) have not yet been officially accepted by FEMA. However, they are considered the current effective maps because they are the most accurate and up-to-date information the City has for those areas. FEMA will set forth a process for technical comment on the maps. However, there is potential for substantial delay because FEMA must address a question about levies before they will adopt any new floodplain maps in King County.

Final Questions and Deliberations

Commissioner Maul asked if the City produces the floodplain maps and submits them to FEMA for approval. Ms. Nammi said that because the coastal map is multi-jurisdictional, the study was commissioned by King County. The maps currently before the Commission were produced by staff to simplify and illustrate the available data from the official FIRMs. The official maps are available for Commission review, as well. Commissioner Maul asked how the concerns raised by citizens could be addressed. Mr. Landau explained that the City conducted the North Branch of Thornton Creek Study and submitted a proposed new map to FEMA. The Coastal Flood Study was managed by King County, and they also submitted a proposed new map to FEMA to update the FIRM. Once the draft maps have been released by FEMA, public comment would be solicited regarding the proposed maps.

Commissioner Wagner noted that the City does not have jurisdiction to address the technical issues raised by Mr. Kink about waves. These issues would be addressed by FEMA. Mr. Landau said the City could help facilitate discussions with FEMA regarding this issue, but the official public comment regarding the maps would take place during a FEMA process.

Commissioner Wagner asked staff to respond to Mr. Kink's comment that previous LOMAs would no longer be valid. Ms. Nammi explained that existing LOMAs for the coastal area would have been based explicitly on what the previous elevation was. These LOMAs would likely have to be reevaluated in light of the new flood elevation data. She said the City has LOMAs for properties on Boeing Creek, and her expectation is that these would be taken into consideration when that flood area is updated. In all likelihood, the more accurate flood information would negate the need for the LOMAs. Commissioner Wagner asked if there is some expectation that LOMAs that were reviewed and accepted by FEMA would remain valid in perpetuity.

COMMISSIONER WAGNER MOVED THAT THE COMMISSION RECOMMEND THAT THE CITY COUNCIL ADOPT THE CHANGES IN SHORELINE MUNICIPAL CODE (SMC) CHAPTER 20 (ATTACHMENT A) AS DRAFTED BY STAFF. VICE CHAIR ESSELMAN SECONDED THE MOTION.

Commissioner Wagner said staff has done a great job of explaining the proposed amendments. There has been a lot of confusion, and she appreciates the discourse on the various complexities that are involved. Staff has clarified that the proposed amendments are a limited aspect of the entire FMO. Staff also addressed the comments related to SEPA, which were contained in a letter from Ms. Way. Consistent with the Commission's previous discussion about the SEPA Checklist, staff did a good job of addressing Ms. Way's concern by explaining that the FMO would apply citywide, including any new flood areas that are identified when data is updated. Therefore, there would be no negative consequence from not including the additional information recommended by Ms. Way.

Commissioner Wagner recalled that, historically, a transmittal letter drafted by staff is attached to the Commission's recommendation to the City Council. She proposed that the transmittal letter also indicate that the Commission received a lot public comment and concern about flooding on other creeks that are not specifically currently mapped as FEMA floodplains and have not been explicitly studied. It is important to make the City Council aware that this is a concern the Commission contemplated as part of their discussion, but it is outside of their purview.

Vote to Recommend Approval or Denial or Modification

THE MOTION CARRIED UNANIMOUSLY.

Ms. Nammi said staff took note of the Commission's suggested changes to the proposed FMO, and would forward them to the City Council for consideration. However, the Commission is not being asked to make a recommendation regarding the FMO.

Closure of Public Hearing

Chair Moss closed the public hearing.



PUBLIC HEARING RECORD
Development Code Amendments related to
FEMA Floodplain Management
May 3, 2012 / List of Exhibits

- Exhibit 1** May 3, 2012 Staff Report “Public Hearing on Draft Amendments to Title 20 related to Floodplain Management ordinance update”
- Exhibit 2** Final SMC Title 20 code changes related to proposed FMO in Legislative Format
- Exhibit 3** Draft Floodplain Management Ordinance
- Exhibit 4** Flood Hazard Maps – Boeing, Thornton, & Puget Sound
- Exhibit 5** Threshold Determination with Notice of Public Hearing and SEPA Checklist
- Exhibit 6** Comment letter from Gordon Derr LLP, dated 7/5/11
- Exhibit 7** Comment letter from Paramount Park Neighborhood Group, c/o Janet Way, received 5/3/12
- Exhibit 8** Topographical Map and photograph of Paramount Park Open Space, photograph of Littles Creek
- Exhibit 9** Figure 2-3 Stream Reaches, Wetlands and Fish Passage Barriers, Thornton Creek and West Lake Washington Basins Report, pg. 18

OTHER CONTENTS OF THE RECORD

Testimony at 5/3/12 Public Hearing

- Janet Way, Shoreline
- Robert Allen, Shoreline
- Richard Kink, Shoreline

Meeting Minutes of 5/3/12 Public Hearing (includes oral testimony)

Planning Commission Transmittal Letter

Planning Commission Meeting Date: May 3, 2012

Agenda Item 7.A

PLANNING COMMISSION AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE: Public Hearing on Draft Amendments to Title 20 related to Floodplain Management ordinance update
DEPARTMENT: Planning & Community Development
PRESENTED BY: Juniper Nammi, Associate Planner
 Brian Landau, Surface Water Manager

<input checked="" type="checkbox"/> Public Hearing	<input type="checkbox"/> Study Session	<input type="checkbox"/> Recommendation Only
<input type="checkbox"/> Discussion	<input type="checkbox"/> Update	<input type="checkbox"/> Other

INTRODUCTION

At the April 5 study session, the Planning Commission:

- Reviewed the proposed Development Code amendments associated with the Floodplain Management Ordinance (FMO);
- Asked questions regarding the proposed amendments and FMO;
- Solicited public comment;
- Agreed to the proposed Development Code Amendments for the public hearing.

BACKGROUND

Staff presented proposed Title 20 Development Code amendments on April 5 that are required in conjunction with the proposed Floodplain Management Ordinance (FMO) that is proposed to replace the current Chapter 16.12 SMC Flood Damage Prevention in response to direction from the Federal Emergency Management Agency (FEMA).

The Model Floodplain Management Ordinance prepared for FEMA Region X was also provided for reference and to illustrate the scope and general content of the proposed FMO.

Based on discussion at the study session no changes were made to the proposed amendments and no specific additional information was requested from staff.

PROPOSAL & ANALYSIS

The proposed code amendments (**Attachment A**) include changes to the following sections:

- Critical Areas - Modify Chapter 20.80 for consistency with the proposed new FMO, Chapter 13.12,

Approved By:

Project Manager fnPlanning Director pm

000103

- Definitions – Modify one definition and delete 14 duplicate or obsolete definitions related to Flood Hazard Areas and Floodplain regulations to be consistent with the proposed FMO, and
- Administrative Changes - Modify miscellaneous administrative/procedural development regulations in Chapter 20.30, including:

The first draft of the proposed Floodplain Management Ordinance is attached for informational purposes only (**Attachment B**). The FMO will be the subject of City Council discussion and public hearing scheduled in June. Also included for informational purposes are maps showing the mapped flood hazard areas which include Puget Sound and Boeing Creek including the proposed map revisions based on the Incorporated King County Coastal Flood Hazard Study and the Flood Insurance Mapping Study for North Branch Thornton Creek (**Attachments C**). No changes are proposed for Boeing Creek at this time.

At this Planning Commission meeting staff plans to present a couple example scenarios to illustrate how the proposed FMO interacts with the Shoreline Master Program and the Chapter 20.80 Critical Areas.

TIMING AND SCHEDULE

- Planning Commission Public Hearing noticed April 18, 2012
- SEPA noticed with Optional Determination of Nonsignificance on April 18, 2012 (**Attachment D**)
- Department of Commerce noticed April 26, 2012
- Council Study Session scheduled for June 4, 2012
- Council Public Hearing notice scheduled for June 8, 2012
- Council Public Hearing and Adoption scheduled for June 25, 2012

PUBLIC COMMENT

One comment letter, dated July 5, 2011, was received related to the required Floodplain Management code update (**Attachment E**). No public comments were received at the April 5, 2012, study session on this topic.

RECOMMENDATION

Staff recommends that the Planning Commission recommend approval to the City Council on the proposed Development Code Amendments listed in **Attachment A**.

ATTACHMENTS

Attachment A – Final SMC Title 20 code changes related to proposed FMO in Legislative Format

Attachment B – Draft Floodplain Management Ordinance

Attachment C – Flood Hazard Maps – Boeing, Thornton, & Puget Sound

Attachment D – Threshold Determination with Notice of Public Hearing and SEPA
Checklist

Attachment E – Comment letter from Gordon Derr LLP dated July 5, 2011

Chapter 20.20 Definitions

20.20.012 B definitions

Base Flood ~~The flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the "100-year flood."~~

Base Flood Elevation ~~The water surface elevation of the base flood in relation to the National Geodetic Vertical Datum of 1929.~~

20.20.014 C definitions

Coastal High Hazard Area ~~An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on the FIRM as zone V1-V30, VE, or V.~~

20.20.020 F definitions

Federal Emergency Management Agency (FEMA) Floodway ~~The channel of the stream and that portion of the adjoining floodplain which is necessary to contain and discharge the base flood flow without increasing the base flood elevation more than one foot.~~

Flood ~~The temporary overflowing of water onto land that is usually devoid of surface water.~~

Flood Fringe ~~That portion of the floodplain outside of the zero-rise floodway which is covered by floodwaters during the base flood, generally associated with standing water rather than rapidly flowing water.~~

Flood Hazard Areas ~~Those areas in the City of Shoreline identified as Special Flood Hazard Areas and Protected Areas as defined in SMC Chapter 13.12, which comprise the Regulatory Floodplain. subject to inundation by the base flood including, but not limited to, streams, lakes, wetlands and closed depressions.~~

Flood Insurance Rate Map (FIRM) ~~The official map on which the Federal Insurance Administration has delineated some areas of flood hazard.~~

Flood Insurance Study for King County ~~The official report provided by the Federal Insurance Administration which includes flood profiles and the flood insurance rate map.~~

Flood Protection Elevation ~~An elevation which is one foot above the base flood elevation.~~

Floodplain ~~The total area subject to inundation by the base flood.~~

Floodproofing ~~Adaptations which will make a structure that is below the flood protection elevation substantially impermeable to the passage of water and resistant to hydrostatic and hydrodynamic loads including the impacts of buoyancy.~~

Floodway ~~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.~~

Floodway, Zero-rise ~~The channel of a stream and that portion of the adjoining floodplain which is necessary to contain and discharge the base flood flow without any measurable increase in flood height. A measurable increase in base flood height means a calculated upward rise in the base flood elevation, equal to or greater than 0.01 foot, resulting from a comparison of existing conditions and changed conditions directly attributable to development in the floodplain. This definition is broader than the FEMA floodway, but always contains the FEMA floodway.~~

20.20.046 S definitions

Substantial Improvement ~~Any maintenance, repair, structural modification, addition or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either before the maintenance, repair, modification or addition is started or before the damage occurred, if the structure has been damaged and is being restored.~~

Chapter 20.30 Procedures and Administration

20.30.040 Ministerial decisions – Type A.

These decisions are based on compliance with specific, nondiscretionary and/or technical standards that are clearly enumerated. These decisions are made by the Director and are exempt from notice requirements.

However, permit applications, including certain categories of building permits, and permits for projects that require a SEPA threshold determination, are subject to public notice requirements specified in Table 20.30.050 for SEPA threshold determination.

All permit review procedures and all applicable regulations and standards apply to all Type A actions. The decisions made by the Director under Type A actions shall be final. The Director's decision shall be based upon findings that the application conforms (or does not conform) to all applicable regulations and standards.

Table 20.30.040 – Summary of Type A Actions and Target Time Limits for Decision, and Appeal Authority

Action Type	Target Time Limits for Decision (Calendar Days)	Section
Type A:		
1. Accessory Dwelling Unit	30 days	20.40.120, 20.40.210
2. Lot Line Adjustment including Lot Merger	30 days	20.30.400
3. Building Permit	120 days	All applicable standards
4. Final Short Plat	30 days	20.30.450
5. Home Occupation, Bed and Breakfast, Boarding House	120 days	20.40.120, 20.40.250, 20.40.260, 20.40.400
6. Interpretation of Development Code	15 days	20.10.050, 20.10.060, 20.30.020
7. Right-of-Way Use	30 days	12.15.010 – 12.15.180
8. Shoreline Exemption Permit	15 days	Shoreline Master Program
9. Sign Permit	30 days	20.50.530 – 20.50.610
10. Site Development Permit	60 days	20.20.046, 20.30.315, 20.30.430
11. Deviation from Engineering Standards	30 days	20.30.290

12. Temporary Use Permit	15 days	20.40.100
13. Clearing and Grading Permit	60 days	20.50.290 – 20.50.370
14. Planned Action Determination	28 days	20.90.025
15. Administrative Design Review	28 days	20.30.297
<u>13. Floodplain Development Permit</u>	<u>30 days</u>	<u>13.12.700</u>
<u>17. Floodplain Variance</u>	<u>30 days</u>	<u>13.12.800</u>

20.30.333 Critical area special use permit (Type C action).

A. **Purpose.** The purpose of the critical areas special use permit is to allow development by a public agency or utility when the strict application of the critical areas standards would otherwise unreasonably prohibit the provision of public services. This type of permit does not apply to flood hazard areas.

20.30.336 Critical areas reasonable use permit (Type C action).

A. **Purpose.** The purpose of the critical areas reasonable use permit is to allow development and use of private property when the strict application of the critical area standards would otherwise deny all reasonable use of a property. This type of permit does not apply to flood hazard areas.

20.30.410 Preliminary subdivision review procedures and criteria.

The short subdivision may be referred to as a short plat – Type B action.

The formal subdivision may be referred to as long plat – Type C action.

Time limit: A final short plat or final long plat meeting all of the requirements of this chapter and Chapter 58.17 RCW shall be submitted for approval within the timeframe specified in RCW 58.17.140.

Review criteria: The following criteria shall be used to review proposed subdivisions:

A. Environmental.

1. Where environmental resources exist, such as trees, streams, ravines or wildlife habitats, the proposal shall be designed to fully implement the goals, policies, procedures and standards of the critical areas chapter, Chapter 20.80 SMC, Critical Areas, and the tree conservation, land clearing and site grading standards sections.

2. The proposal shall be designed to minimize grading by using shared driveways and by relating street, house site and lot placement to the existing topography.

3. Where conditions exist which could be hazardous to the future residents of the land to be divided, or to nearby residents or property, such as flood plains, steep slopes or unstable soil or geologic conditions, a subdivision of the hazardous land shall be denied unless the condition can be permanently corrected, consistent with subsections (A)(1) and (2) of this section and Chapter 13.12 Floodplain Management.

20.30.740 Declaration of public nuisance, enforcement.

A. A Code Violation, as used in this subchapter, is declared to be a public nuisance and includes violations of the following:

1. Any City land use and development ordinances or public health ordinances;
2. Any public nuisance as set forth in Chapters 7.48 and 9.66 RCW;
3. Violation of any of the Codes adopted in Chapter 15.05 SMC;
4. Violation of provisions of Chapter 12.15 SMC, Use of Right-of-Way;
5. Any accumulation of refuse, except as provided in Chapter 13.14 SMC, Solid Waste Code;
6. Nuisance vegetation;
7. Discarding or dumping of any material onto the public right-of-way, waterway, or other public property; ~~and~~
8. Violation of any of the provisions of Chapter 13.10 SMC, Surface Water Management Code; and-
9. Violations of any of the provisions of Chapter 13.12 SMC, Floodplain Management.

Chapter 20.80 Critical Areas

20.80.010 Purpose.

A. The purpose of this chapter is to establish supplemental standards for the protection of critical areas in compliance with the provisions of the Washington Growth Management Act of 1990 (Chapter 36.70A RCW) and consistent with the goals and policies of the Shoreline Comprehensive Plan in accordance with the procedures of Chapter 20.30 SMC.

B. By identifying and regulating development and alterations to critical areas and their buffers, it is the intent of this chapter to:

1. Protect the public from injury, loss of life, property damage or financial losses due to flooding, erosion, landslide, seismic events, soils subsidence or steep slope failure;
2. Protect unique, fragile and valuable elements of the environment;
3. Reduce cumulative adverse environmental impacts to water quality, wetlands, streams and other aquatic resources, fish and wildlife habitat, steep slopes and geologically unstable features;
- ~~4. Meet the requirements of the National Flood Insurance Program and maintain the City of Shoreline as an eligible community for Federal flood insurance benefits;~~
- ~~54.~~ Ensure the long-term protection of ground and surface water quality;
- ~~65.~~ Alert members of the public, including appraisers, assessors, owners, potential buyers, or lessees, to the development limitations of critical areas and their required buffers;
- ~~76.~~ Serve as a basis for exercise of the City's substantive authority under the State Environmental Policy Act (SEPA) and the City's Environmental Procedures (Chapter 20.30 SMC, Subchapter 8); and comply with the requirements of the Growth Management Act (Chapter 36.70A RCW) and its implementing rules;
- ~~87.~~ Establish standards and procedures that are intended to protect environmentally critical areas while accommodating the rights of property owners to use their property in a reasonable manner; and
- ~~98.~~ Provide for the management of critical areas to maintain their functions and values and to restore degraded ecosystems. (Ord. 398 § 1, 2006; Ord. 324 § 1, 2003; Ord. 238 Ch. VIII § 1(A), 2000).

Subchapter 5. Flood Hazard Areas

20.80.360 Description and purpose.

A. ~~A flood hazard area consists of the following components: floodplain; flood fringe; zero-rise floodway; and Federal Emergency Management Agency (FEMA) floodway.~~ Special Flood Hazard Areas and Protected Areas as defined in SMC Chapter 13.12, which comprise the Regulatory Floodplain.

B. It is the purpose of these regulations to ensure that the City of Shoreline meets the requirements of the National Flood Insurance Program and maintains the City as an eligible community for Federal flood insurance benefits.

C. ~~A tsunami hazard area may be designated as a flood hazard area by the Federal or State government.~~ (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(A), 2000).

20.80.370 Classification.

Flood hazard areas shall be determined pursuant to the requirements of the Floodplain Management regulations, SMC 13.12, which include, at a minimum, all lands identified on the 100-year floodplain designations of the current Federal Emergency Management Agency (FEMA) Flood Insurance as identified in SMC 13.12.XXX. ~~after obtaining, reviewing and utilizing base flood elevations and available floodway data for a flood having a one percent chance of being equaled or exceeded in any given year, often referred to as the "100-year flood." The base flood is determined for existing conditions, and is shown on Flood Insurance Rate Maps for King County (FIRM) and incorporated areas, current version; or mapped on the King County Sensitive Areas Folio, unless a more complete basin plan including projected flows under future developed conditions has been completed and adopted by the City of Shoreline, in which case these future flow projections shall be used. In areas where the flood insurance study for the City includes detailed base flood calculations, those calculations may be used.~~ (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(B), 2000).

20.80.380 Development Limitations.

A. All development within designated flood hazard areas shall comply with Chapter 13.12 SMC, Floodplain Management, as now or hereafter amended, and are not subject to the regulations of this chapter.

~~20.80.380 Flood fringe—Development standards and permitted alterations.~~

A. ~~Development proposals shall not reduce the effective base flood storage volume of the floodplain. Grading or other activity which would reduce the effective storage volume shall be mitigated by creating compensatory storage on the site or off the site if legal arrangements can be made to assure that the effective compensatory storage volume will be preserved over time.~~

~~B.— No structure shall be allowed which would be at risk due to stream bank destabilization including, but not limited to, that associated with channel relocation or meandering.~~

~~C.— All elevated construction shall be designed and certified by a professional structural engineer licensed by the State of Washington and the design shall be approved by the City prior to construction.~~

~~D.— Subdivisions, short subdivisions, lot line adjustments and binding site plans shall meet the following requirements:~~

~~1.— New building lots shall contain no less than 5,000 square feet of buildable land outside the zero-rise floodway, and building setback areas shall be shown on the face of the plat to restrict permanent structures to this buildable area;~~

~~2.— All utilities and facilities such as stormwater facilities, sewer, gas, electrical and water systems shall be located and constructed consistent with the standards and requirements of this section;~~

~~3.— Base flood data and flood hazard notes shall be shown on the face of the recorded subdivision, short subdivision, lot line adjustment or binding site plan including, but not limited to, the base flood elevation, required flood protection elevations and the boundaries of the floodplain and the zero-rise floodway, if determined; and~~

~~4.— The following notice shall also be shown on the face of the recorded subdivision, short subdivision, lot line adjustment or binding site plan for all affected lots:~~

~~—NOTICE~~

~~—Lots and structures located within Flood Hazard Areas may be inaccessible by emergency vehicles during flood events. Residents and property owners should take appropriate advance precautions.~~

~~E.— New residential structures and improvements that include the creation of new impervious surfaces associated with existing residential structures shall meet the following requirements:~~

~~1.— The lowest floor shall be elevated to the flood protection elevation;~~

~~2.— Portions of a structure which are below the lowest floor area shall not be fully enclosed. The areas and rooms below the lowest floor shall be designed to automatically equalize hydrostatic and hydrodynamic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for satisfying this requirement shall meet or exceed the following requirements:~~

~~a.— A minimum of two openings on opposite walls having a total open area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;~~

~~b.— The bottom of all openings shall be no higher than one foot above grade; and~~

~~c. Openings may be equipped with screens, louvers or other coverings or devices if they permit the unrestricted entry and exit of floodwaters;~~

~~3. Materials and methods which are resistant to and minimize flood damage shall be used; and~~

~~4. All electrical, heating, ventilation, plumbing, air conditioning equipment and other utility and service facilities shall be floodproofed to or elevated above the flood protection elevation.~~

~~F. New nonresidential structures and substantial improvements of existing nonresidential structures shall meet the following requirements:~~

~~1. Elevation.~~

~~a. Requirements for residential structures contained in subsection (E)(1) of this section shall be met; or~~

~~b. The structure shall be floodproofed to the flood protection elevation and shall meet the following requirements:~~

~~i. The applicant shall provide certification by a professional civil or structural engineer licensed by the State of Washington that the floodproofing methods are adequate to withstand the flood depths, pressures, velocities, impacts, uplift forces and other factors associated with the base flood. After construction, the engineer shall certify that the permitted work conforms with the approved plans and specifications; and~~

~~ii. Approved building permits for floodproofed nonresidential structures shall contain a statement notifying applicants that flood insurance premiums shall be based upon rates for structures which are one foot below the floodproofed level;~~

~~2. Materials and methods which are resistant to and minimize flood damage shall be used; and~~

~~3. All electrical, heating, ventilation, plumbing, air conditioning equipment and other utility and service facilities shall be floodproofed to or elevated above the flood protection elevation.~~

~~G. All new construction shall be anchored to prevent flotation, collapse or lateral movement of the structure.~~

~~H. Utilities shall meet the following requirements:~~

~~1. New and replacement utilities including, but not limited to, sewage treatment facilities shall be floodproofed to or elevated above the flood protection elevation;~~

~~2. Aboveground utility transmission lines, other than electric transmission lines, shall only be allowed for the transport of nonhazardous substances; and~~

3. Buried utility transmission lines transporting hazardous substances shall be installed at a minimum depth of four feet below the maximum depth of scour for the base flood, as predicted by a professional civil engineer licensed by the State of Washington, and shall achieve sufficient negative buoyancy so that any potential for flotation or upward migration is eliminated.

I. Critical facilities may be allowed within the flood fringe of the floodplain, but only when no feasible alternative site is available. Critical facilities shall be evaluated through the conditional or special use permit process. Critical facilities constructed within the flood fringe shall have the lowest floor elevated to three or more feet above the base flood elevation. Floodproofing and sealing measures shall be taken to ensure that hazardous substances will not be displaced by or released into floodwaters. Access routes elevated to or above the base flood elevation shall be provided to all critical facilities from the nearest maintained public street or roadway.

J. Prior to approving any permit for alterations in the flood fringe, the City shall determine that all permits required by State or Federal law have been obtained. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(C), 2000).

20.80.390 Zero-rise floodway—Development standards and permitted alterations.

A. The requirements which apply to the flood fringe shall also apply to the zero-rise floodway. The more restrictive requirements shall apply where there is a conflict.

B. A development proposal including, but not limited to, new or reconstructed structures shall not cause any increase in the base flood elevation unless the following requirements are met:

1. Amendments to the flood insurance rate map are adopted by FEMA, in accordance with 44 CFR 70, to incorporate the increase in the base flood elevation; and

2. Appropriate legal documents are prepared in which all property owners affected by the increased flood elevations consent to the impacts on their property. These documents shall be filed with the title of record for the affected properties.

C. The following are presumed to produce no increase in base flood elevation and shall not require a special study to establish this fact:

1. New residential structures outside the FEMA floodway on lots in existence before November 27, 1990, which contain less than 5,000 square feet of buildable land outside the zero-rise floodway and which have a total building footprint of all proposed structures on the lot of less than 2,000 square feet;

2. Substantial improvements of existing residential structures in the zero-rise floodway, but outside the FEMA floodway, where the footprint is not increased; or

~~3. Substantial improvements of existing residential structures meeting the requirements for new residential structures in this title.~~

~~D. Post or piling construction techniques which permit water flow beneath a structure shall be used.~~

~~E. All temporary structures or substances hazardous to public health, safety and welfare, except for hazardous household substances or consumer products containing hazardous substances, shall be removed from the zero-rise floodway during the flood season from September 30th to May 1st.~~

~~F. New residential structures or any structure accessory to a residential use shall meet the following requirements:~~

~~1. The structures shall be outside the FEMA floodway; or~~

~~2. The structures shall be on lots in existence before November 27, 1990, which contain less than 5,000 square feet of buildable land outside the zero-rise floodway. Structures shall be designed and situated to minimize encroachment into the zero-rise floodway.~~

~~G. Utilities may be allowed within the zero-rise floodway if the City determines that no feasible alternative site is available, subject to the requirements of this section. Construction of sewage treatment facilities shall be prohibited.~~

~~H. Critical facilities shall not be allowed within the zero-rise floodway except as provided in subsection (I) of this section.~~

~~I. Structures and installations which are dependent upon the floodway may be located in the floodway if the development proposal is approved by all agencies with jurisdiction. Such structures include, but are not limited to:~~

~~1. Dams or diversions for water supply, flood control, or fisheries enhancement;~~

~~2. Flood damage reduction facilities, such as levees and pumping stations;~~

~~3. Stream bank stabilization structures where no feasible alternative exists for protecting public or private property;~~

~~4. Stormwater conveyance facilities subject to the development standards for streams and wetlands and the surface water design manual;~~

~~5. Boat launches and related recreation structures;~~

~~6. Bridge piers and abutments; and~~

~~7. Other fisheries enhancement or stream restoration projects. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(D), 2000).~~

~~20.80.400 FEMA floodway — Development standards and permitted alterations.~~

~~A. The requirements which apply to the zero-rise floodway shall also apply to the FEMA floodway. The more restrictive requirements shall apply where there is a conflict.~~

~~B. A development proposal including, but not limited to, new or reconstructed structures shall not cause any increase in the base flood elevation.~~

~~C. New residential or nonresidential structures shall be prohibited within the FEMA floodway.~~

~~D. Substantial improvements of existing residential structures in the FEMA floodway, meeting the requirements of WAC 173-158-070, as amended, are presumed to produce no increase in base flood elevation and shall not require a special study to establish this fact. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(E), 2000).~~

~~20.80.410 Flood hazard areas — Certification by engineer or surveyor.~~

~~A. For all new structures or substantial improvements in a flood hazard area, the applicant shall provide certification by a professional civil engineer or land surveyor licensed by the State of Washington of:~~

~~1. The actual as-built elevation of the lowest floor, including basement; and~~

~~2. The actual as-built elevation to which the structure is floodproofed, if applicable.~~

~~B. The engineer or surveyor shall indicate if the structure has a basement.~~

~~C. The City shall maintain the certifications required by this section for public inspection. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 6(F), 2000).~~

Chapter 13.12 Floodplain Management

13.12.100 General

A. 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. Therefore, the City of Shoreline does ordain as follows:

B. Findings of Fact

1. The City of Shoreline has areas that are subject to periodic inundation and channel migration which results in loss of life and property, health, and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for protection and relief from flooding and channel migration, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
2. When floodplains and watersheds are developed without appropriate care and precautions, flood heights, frequencies, and velocities increase, increasing threat to humans, damage to property, destruction of natural floodplain functions, and adverse impacts to water quality and habitat.
3. Rivers, streams, lakes, estuarine and marine areas, and their floodplains are major elements of healthy aquatic and riparian habitats and conveyance of floodwaters. If watersheds, rivers, streams, lakes, estuaries, floodplains, and other systems are not viewed holistically as biological and geomorphologic units, serious degradation of habitat and increased flood hazards to people and human development can increase.
4. Over the years, natural processes have evolved that manage flood waters and channel flows in the most effective and efficient manner. Disruption of these processes by altering land cover, stream channels, wetlands, and other water bodies leads to increased flood hazards, loss of life and property, threats to public health, and loss of habitat.

C. Purpose

It is the purpose of this chapter to promote the public health, safety, and general welfare by managing development in order to:

1. Protect human life, health and property from the dangers of flooding;
2. Minimize the need for publicly funded and hazardous rescue efforts to save those who are isolated by flood waters;
3. Minimize expenditure of public money for costly flood damage repair and flood control projects;
4. Minimize disruption of commerce and governmental services;
5. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in the floodplain;
6. Maintain a stable tax base by providing for the sound use of flood prone areas to minimize future flood blight areas;

7. Encourage those who occupy areas subject to flooding and channel migration assume responsibility for their actions;
8. Qualify the City for participation in the National Flood Insurance Program, thereby giving citizens and businesses the opportunity to purchase flood insurance;
9. Maintain the quality of water in rivers, streams, lakes, estuaries, and marine areas and their floodplains so as to protect public water supplies, areas of the Public Trust, and wildlife habitat protected by the Endangered Species Act;
10. Retain the natural channel, shoreline, and floodplain creation processes and other natural floodplain functions that protect, create, and maintain habitat for threatened and endangered species.
11. Prevent or minimize loss of hydraulic, geomorphic, and ecological functions of floodplains and stream channels.

D. Applicability.

This chapter shall apply to the Regulatory Floodplain, which is comprised of the Special Flood Hazard Area and all Protected Areas within the jurisdiction of the City of Shoreline as defined in Section 13.12.105.

13.12.105 Definitions.

Unless specifically defined below, terms 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. The definitions in this section apply throughout this chapter unless the context clearly requires otherwise.

- A. Adversely affect/Adverse effect: Effect that is a direct or indirect result of the proposed action or its interrelated or interdependent actions and the effects are not discountable, insignificant or beneficial. A discountable effect is extremely unlikely to occur. An insignificant effect relates to the size of the impact and should never reach the scale where a take occurs. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate an insignificant effect; or (2) expect a discountable effect to occur.
- B. Beneficial effect: Contemporaneous positive effect without any adverse effect. In the event that the overall effect of the proposed action is beneficial, but is also likely to cause some adverse effect, then the proposed action is considered to result in an adverse effect.
- C. Appurtenant structure: A structure which is on the same parcel of property as the principle structure to be insured and the use of which is incidental to the use of the principle structure.
- D. Base Flood: The flood having a one percent chance of being equaled or exceeded in any given year (also referred to as the “100-year flood”). The area subject to the base flood is the Special Flood Hazard Area designated on Flood Insurance Rate Maps as Zones “A” or “V” including AE, AO, AH, A1-99 and VE.
- E. Base Flood Elevation: The elevation of the base flood above the datum of the effective Flood Insurance Rate Map (FIRM).

- F. Basement: Any area of the structure having its floor subgrade (below ground level) on all sides.
- G. Channel Migration Zone: The area within the lateral extent of likely stream channel movement due to stream bank destabilization and erosion, rapid stream incision, aggradations, avulsions, and shifts in location of stream channels.
- H. Critical Facility: A facility necessary to protect the public health, safety, and welfare during a flood. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency operations installations, water and wastewater treatment plants, electric power stations, and installations which produce, use, or store hazardous materials or hazardous waste (other than consumer products containing hazardous substances or hazardous waste intended for household use).
- I. Development: Any manmade change to improved or unimproved real estate in the Regulatory Floodplain, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, storage of equipment or materials, subdivision of land, removal of more than 5% of the native vegetation on the property, or alteration of natural site characteristics.
- J. Director. Public Works Director or designee.
- K. Dry Floodproofing: Any combination of structural and nonstructural measures that prevent floodwaters from entering a structure.
- L. Elevation Certificate: The official form (FEMA Form 81-31) used to provide elevation information necessary to ensure compliance with provisions of this chapter and determine the proper flood insurance premium rate.
- M. ESA: Endangered Species Act
- N. Federal Emergency Management Agency (FEMA): The agency responsible for administering the National Flood Insurance Program.
- O. Fish and Wildlife Habitat Conservation Area: Lands needed to maintain species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. These areas are designated by the City of Shoreline pursuant to the Washington State Growth Management Act (WAC 365-190-080).
- P. Flood or Flooding: A general and temporary condition of partial or complete inundation of normally dry land areas from:
 1. The overflow of inland or tidal waters, and/or
 2. The unusual and rapid accumulation of runoff of surface waters from any source.
- Q. Flood Insurance Rate Map (FIRM): The official map on which the Federal Emergency Management Agency has delineated both the Special Flood Hazard Areas and the risk premium zones applicable to the community.
- R. Flood Protection Elevation (FPE): The elevation above the datum of the effective FIRM to which new and substantially improved structures must be protected from flood damage.

- S. Flood Insurance Study: The official report provided by the Federal Emergency Management Agency that includes flood profiles, the Flood Insurance Rate Map, and the water surface elevation of the base flood.
- T. Floodway: The channel of a stream 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 at any point.
- U. Functionally Dependent Use: A use that must be located or carried out close to water, for example docking or port facilities necessary for the unloading of cargo or passengers, or shipbuilding and ship repair.
- V. Historic Structure: A structure that:
 - 1. Is listed on the National Register of Historic Places, the Washington Heritage Register, or the Washington Heritage Barn Register, or
 - 2. Has been certified to contribute to the historical significance of a registered historic district.
- W. Hyporheic Zone: A saturated layer of rock or sediment beneath and/or adjacent to a stream channel that contains some proportion of channel water or that has been altered by channel water infiltration.
- X. Impervious Surface: A hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled macadam or other surfaces which similarly impede the natural infiltration of stormwater.
- Y. Lowest Floor: The lowest floor of the lowest enclosed area (including basement or crawlspace) of a structure. An unfinished or flood resistant enclosure, used solely for parking of vehicles, building access, or storage in an area other than a basement area, is not considered a structure's lowest floor, provided that such enclosure is compliant with Section 13.12.500.A.6, so that there are adequate openings to allow floodwaters into the area.
- Z. Manufactured Home: 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 attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle."
- AA. Manufactured Home Park or Subdivision: A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.
- BB. Native Vegetation: Plant species that are indigenous to the community's area and that reasonably could be expected to naturally occur on the site.
- CC. Natural Floodplain Functions: The contribution that a floodplain makes to support habitat, including, but not limited to providing flood storage and conveyance, reducing flood velocities, reducing sedimentation, filtering nutrients and impurities from runoff,

processing organic wastes, moderating temperature fluctuations, and providing breeding and feeding grounds, shelter, and refugia, for aquatic or riparian species.

DD. New Construction: Structures for which the “start of construction” commenced on or after the effective date of this chapter.

EE. NMFS: National Marine Fisheries Service

FF. Protected Area: The lands that lie within the boundaries of the floodway, the riparian habitat zone, and the channel migration area. Because of the impact that development can have on flood heights and velocities and habitat, special rules apply in the Protected Area.

GG. Recreational Vehicle: A vehicle,

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

HH. Regulatory Floodplain: The area of the Special Flood Hazard Area plus the Protected Area, as defined in Section 13.12.300. The term also includes newly designated areas that are delineated pursuant to Section 13.12.300.E.

II. Riparian: Of, adjacent to, or living on, the bank of a river, lake, pond, ocean, sound, or other water body.

JJ. Riparian Habitat Zone: The water body and adjacent land areas that are likely to support aquatic and riparian habitat as detailed in Section 13.12.300.D.2 of this chapter.

Special Flood Hazard Area (SFHA): The land subject to inundation by the base flood. Special Flood Hazard Areas are designated on Flood Insurance Rate Maps with the letters “A” or “V” including AE, AO, AH, A1-99 and VE. The Special Flood Hazard Area is also referred to as the area of special flood hazard or SFHA.

KK. Start of Construction: Includes substantial improvement, and means the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement that occurred before the permit’s expiration date. The actual start is either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation.

Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations, or the erection of temporary forms; nor does it include the installation on the property of accessory structures not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

- LL. Structure: A walled and roofed building, including a gas or liquid storage tank that is principally above ground.
- MM. Substantial Damage: Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.
- Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25% of the market value of the structure before the damage occurred.
- NN. Substantial Improvement: Any repair, reconstruction, rehabilitation, addition, replacement, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures that have incurred “substantial damage,” regardless of the actual repair work performed.
- The term does not include any project for improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions.
- OO. Variance (Floodplain): A grant of relief from the requirements of this subchapter that permits construction in a manner that would otherwise be prohibited by this subchapter.
- PP. Water Typing: A system for classifying water bodies according to their size and fish habitat characteristics. The Washington Department of Natural Resources’ Forest Practices Water Typing classification system is hereby adopted by reference. The system defines four water types:
1. Type “S” = Shoreline: Streams that are designated “shorelines of the State,” including marine shorelines
 2. Type “F” = Fish: Streams that are known to be used by fish or meet the physical criteria to be potentially used by fish.
 3. Type “Np” = Non-Fish Perennial streams
 4. Type “Ns” = Non-Fish Seasonal streams
- QQ. Waters of the state: Includes lakes, rivers, ponds, streams, inland waters, underground water, salt waters, estuaries, tidal flats, beaches, and lands adjoining the seacoast of the state, sewers, and all other surface waters and watercourses within the jurisdiction of the state of Washington.
- RR. Zone: One or more areas delineated on the FIRM. The following zones may be used on the adopted FIRM. The Special Flood Hazard Area is comprised of the A and V Zones.
- A: SFHA where no base flood elevation is provided.*
- A#: numbered A Zones (e.g., A7 or A14), SFHA with a base flood elevation.*
- AE: SFHA with a base flood elevation.*

AO: SFHA subject to inundation by shallow flooding usually resulting from sheet flow on sloping terrain, with average depths between one and three feet. Average flood depths are shown.

AH: SFHA subject to inundation by shallow flooding (usually pond areas) with average depths between one and three feet. Base flood elevations are shown.

B: The area between the SFHA and the 500-year flood of the primary source of flooding. It may also be an area with a local, shallow flooding problem or an area protected by a levee.

C: An area of minimal flood hazard, as above the 500-year flood level of the primary source of flooding. B and C Zones may have flooding that does not meet the criteria to be mapped as a Special Flood Hazard Area, especially pond and local drainage problems.

D: area of undetermined but possible flood hazard.

V: The SFHA subject to coastal high hazard flooding including waves of 3' or greater in height. There are three types of V Zones: V, V#, and VE, and they correspond to the A Zone designations.

X: The area outside the mapped SFHA.

X - Shaded: the same as a Zone B, above.

13.12.200. Floodplain Administrator

A. Administrator Designation

The Public Works Director is hereby appointed as the Floodplain Administrator, herein after known as the Director, to administer and implement this chapter by granting or denying floodplain development permit applications in accordance with its provisions.

B. Administrator Duties

The Director's duties shall include, but shall not be limited to the following:

1. Ensure that all development activities within the Regulatory Floodplain of the jurisdiction of the City meet the requirements of this chapter.
2. Review all floodplain development permits to determine that the permit requirements of this chapter have been satisfied.
3. Review all floodplain development permits to determine if the proposed development is located in the Protected Area. If located in the Protected Area, ensure that the provisions of Section 13.12.600 are met.
4. Review all floodplain 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, including those local, State or Federal permits that may be required to assure compliance with the Endangered Species Act and/or other appropriate State or Federal laws.
5. Delegate to the Building Official or designee, the responsibility to inspect all development projects before, during, and after construction to ensure compliance with all provisions of this chapter, including proper elevation of the structure.
6. Maintain for public inspection all records pertaining to the provisions of this chapter.

7. Submit reports as required for the National Flood Insurance Program.
 8. Notify FEMA of any proposed amendments to this chapter.
 9. Cooperate with State and Federal agencies to improve flood and other technical data and notify FEMA of any new data that would revise the FIRM.
- C. Upon receipt of a permit for a development project within a floodplain, the Director shall compare the elevation of the site to the base flood elevation. A development project is not subject to the requirements of this chapter if it is located on land that can be shown to be:
1. Outside the Protected Area, and
 2. Higher than the base flood elevation.
- D. The Director shall inform the applicant that the project may still be subject to the flood insurance purchase requirements unless the owner receives a Letter of Map Amendment from FEMA.
- E. The Director shall make interpretations where needed, as to the exact location of the boundaries of the Regulatory Floodplain, the SFHA and the Protected Area where there appears to be a conflict between the mapped SFHA boundary and actual field conditions as determined by the base flood elevation and ground elevations. The applicant may appeal the Director's interpretation of the location of the boundary to the Hearing Examiner according to the procedures described in SMC 20.30.200 through 20.30.270.

13.12.300. Regulatory Data

A. Regulatory Floodplain

The Regulatory Floodplain is comprised of the Special Flood Hazard Area and all Protected Areas within the jurisdiction of City of Shoreline. The term also includes areas delineated pursuant to Section 13.12.300.E.

B. Special Flood Hazard Area

The Special Flood Hazard Area (SFHA) is the area subject to flooding by the base flood and subject to the provisions of this chapter. It is identified by the Federal Emergency Management Agency in a scientific and engineering report entitled "Flood Insurance Study for King County **and Incorporated Areas**" dated November 6, 2010, **Flood Insurance Study Number 53033CV001B**, and any revisions thereto, with an accompanying Flood Insurance Rate Map (FIRM)), and any revisions thereto, are hereby adopted by reference and declared to be a part of this chapter. The Flood Insurance Study and the FIRM are on file at 17500 Midvale Ave N, Shoreline, WA 98133.

C. Flood Hazard Data

1. The base flood elevation for the SFHAs of City of Shoreline shall be as delineated on the 100-year flood profiles in the Flood Insurance Study for King County.
2. The base flood elevation for each SFHA delineated as a "Zone AH" or "Zone AO" shall be that elevation (or depth) delineated on the Flood Insurance Rate Map. Where base flood depths are not available in Zone AO, the base flood elevation shall be considered two feet above the highest grade adjacent to the structure.

3. The base flood elevation for all other SFHAs shall be as defined in Sections 13.12.300.C.6 and 13.12.300.E.3.
4. The Flood Protection Elevation (FPE) shall be the base flood elevation plus one foot.
5. The floodway shall be as delineated on the Flood Insurance Rate Map or in accordance with Sections 13.12.300.C.6 and 13.12.300.E.4.
6. Where base flood elevation and floodway data have not been provided in Special Flood Hazard Areas, the Director shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source.

D. Protected Area

The Protected Area is comprised of those lands that lie within the boundaries of the floodway, and the riparian habitat zone, and the channel migration area.

1. In riverine areas, where a floodway has not been designated in accordance with Sections 13.12.300.C.5, 13.12.300.C.6, or 13.12.300.E.4, the Protected Area is comprised of those lands that lie within the boundaries of the riparian habitat zone, the channel migration area, and the SFHA.
2. The riparian habitat zone includes those watercourses within the SFHA and adjacent land areas that are likely to support aquatic and riparian habitat. The size and location of the riparian habitat zone is dependent on the type of water body. The riparian habitat zone includes the water body and adjacent lands, measured perpendicularly from ordinary high water on both sides of the water body:
 - a. Type S: streams that are designated "shorelines of the State:" 250 feet
 - b. Type F: fish bearing streams greater than 5 feet wide and marine shorelines: 200 feet
 - c. Type F: streams less than 5 feet wide and lakes: 150 feet
 - d. Type N: nonsalmonid bearing perennial and seasonal streams with unstable slopes: 225 feet
 - e. All other Type N: nonsalmonid bearing perennial and seasonal streams: 150 feet
3. Channel Migration Area:
 - a. The channel migration area shall be the channel migration zone plus 50 feet.
 - b. Where a channel migration zone has not yet been mapped, the provisions of Section 13.12.300.E.5 shall apply at the time of permit application.
 - c. Where more than one channel migration zone has been delineated, the Director shall use the delineation that has been adopted for other local regulatory purposes.

E. New Regulatory Data

1. All requests to revise or change the flood hazard data, including requests for a Letter of Map Revision and a Conditional Letter of Map Revision shall be reviewed by the Director.

- a. The Director shall not sign the Community Acknowledgement Form for any requests based on filling or other development, unless the applicant for the letter documents that such filling or development complies with this chapter.
 - b. The Director shall not approve a request to revise or change a floodway delineation until FEMA has issued a Conditional Letter of Map Revision that approves the change.
2. The Director shall use the most restrictive data available for the channel migration zone, floodways, future conditions, and riparian habitat areas.
3. If an applicant disagrees with the regulatory data prescribed by this chapter, he/she may submit a detailed technical study needed to replace existing data with better data in accordance with FEMA mapping guidelines or *Regional Guidance for Hydrologic and Hydraulic Studies in Support of the Model Ordinance for Floodplain Management and the Endangered Species Act, 2010*, FEMA Region 10. If the data in question are shown on the published FIRM, the submittal must also include a request to FEMA for a Conditional Letter of Map Revision.
4. Where base flood elevation data are not available in accordance with Section 13.12.300.C, applicants for approval of new subdivisions and other proposed developments, including proposals for manufactured home parks and subdivisions greater than 50 lots or 5 acres, whichever is smaller, shall include such data with their permit applications.
5. Where floodway delineation is not available in accordance with Section 13.12.300.C, the floodway will be designated to be one-half the distance of the mapped 100-year floodplain at any point, and the prohibition on floodway development applies, unless a floodway study indicates otherwise. This provision applies to any floodplain development permit, including those for substantial improvements.
6. Where channel migration zone data are not available in accordance with Section 13.12.300.D.3, the permit applicant shall either:
 - a. Designate the entire SFHA as the channel migration zone, or
 - b. Identify the channel migration area in accordance with *Regional Guidance for Hydrologic and Hydraulic Studies in Support of the Model Ordinance for Floodplain Management and the Endangered Species Act, 2010*, FEMA Region 10.
7. All new hydrologic and hydraulic flood studies conducted pursuant to this section shall consider future conditions and the cumulative effects from anticipated future land use changes in accordance with *Regional Guidance for Hydrologic and Hydraulic Studies in Support of the Model Ordinance for Floodplain Management and the Endangered Species Act, 2010*, FEMA Region 10.

13.12.400. General Development Standards

A. Subdivisions

This section applies to all subdivision proposals, short subdivisions, short plats, planned developments, and new manufactured housing parks, as well as expansions to manufactured housing parks.

1. All proposals shall be consistent with the need to minimize flood damage.
2. The proposed subdivision should have one or more new lots in the Regulatory Floodplain set aside for open space use through deed restriction, easement, subdivision covenant, or donation to a public agency.
3. In the Regulatory Floodplain outside the Protected Area, zoning must maintain a low density of floodplain development. The density of the development in the portion of the development outside the Regulatory Floodplain may be increased to compensate for land in the Regulatory Floodplain preserved as open space in accordance with SMC Chapter 20.70.150A.
4. If a parcel has a buildable site outside the Regulatory Floodplain, the parcel shall not be subdivided to create a new lot, tract, or parcel that does not have a buildable site outside the Regulatory Floodplain. This provision does not apply to lots set aside from development and preserved as open space.
5. All proposals shall have utilities and facilities, such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.
6. All proposals shall ensure that all subdivisions have at least one access road connected to land outside the Regulatory Floodplain with the surface of the road at or above the FPE wherever possible.
7. All proposals shall have adequate drainage provided to avoid exposure to water damage.
8. The final recorded subdivision plat shall include a notice that part of the property is in the SFHA, riparian habitat zone, and/or channel migration area, as appropriate.

B. Site Design

1. Structures and other development shall be located to avoid flood damage.
 - a. If a lot has a buildable site out of the Regulatory Floodplain, whenever possible all new structures shall be located in that area.
 - b. If a lot does not have a buildable site out of the Regulatory Floodplain, all new structures, pavement, and other development must be sited in the location that has the least impact on habitat by locating the structures as far from the water body as possible, or by placing the structures on the highest land on the lot,
 - c. All structures shall be setback at least 15 feet from the Protected Area,
2. All new development shall be designed and located to minimize the impact on flood flows, flood storage, water quality, and habitat.
 - a. Stormwater and drainage features shall incorporate low impact development techniques, if technically feasible, that mimic predevelopment hydrologic conditions, such as stormwater infiltration, rain gardens, grass swales, filter strips, disconnected impervious areas, permeable pavement, and vegetative roof systems.
 - b. If the proposed project will create new impervious surfaces so that more than 10 percent of the portion of the lot in the Regulatory Floodplain is covered by impervious surface, the applicant shall demonstrate that there will be no net increase

in the rate and volume of the stormwater surface runoff that leaves the site or that the adverse impact is mitigated, as provided by Section 13.12.600.E and 13.12.600.F.

3. The site plan required in Section 13.12.700.D shall account for surface drainage to ensure that:
 - a. Existing and new buildings on the site will be protected from stormwater runoff and
 - b. The project will not divert or increase surface water runoff onto neighboring properties.
4. If the proposed project does not meet the criteria of Section 13.12.400.B.1 and 13.12.400.B.2, the proponent shall conduct a habitat impact assessment pursuant to 13.12.600.E and, if necessary, the proponent shall prepare and implement a habitat mitigation plan pursuant to Section 13.12.600.F.

C. Hazardous Materials

1. No new development shall create a threat to public health, public safety, or water quality. Chemicals, explosives, gasoline, propane, buoyant materials, animal wastes, fertilizers, flammable liquids, pollutants, or other materials that are hazardous, toxic, or a threat to water quality are prohibited from the Regulatory Floodplain. This prohibition does not apply to small quantities of these materials kept for normal household use. This prohibition does not apply to the continued operations of existing facilities and structures, reuse of existing facilities and structures, or functionally dependent facilities or structures.
2. If the proposed project cannot meet Section 13.12.400.C.1 of this chapter then the proponent shall conduct a habitat assessment in accordance with Sections 13.12.600.E and 13.12.600.F.

D. Critical Facilities

1. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the Regulatory Floodplain.
2. Construction of new critical facilities in the Regulatory Floodplain shall be permissible if no feasible alternative site is available, provided:
 - a. Critical facilities shall have the lowest floor elevated three feet above the base flood elevation or to the height of the 500-year flood, whichever is higher.
 - b. Access to and from the critical facility shall be protected to the elevation of the 500-year flood.
 - c. If there is no available data on the 500-year flood, the permit applicants shall develop the needed data in accordance with FEMA mapping guidelines.

13.12.500 Structure Protection Standards.

- A. In the Special Flood Hazard Area, all new structures and substantial improvements shall be protected from flood damage below the Flood Protection Elevation, including:
 - Construction or placement of a new structure.
 - Reconstruction, rehabilitation, or other improvement that will result in a substantially improved building.

- Repairs to an existing building that has been substantially damaged.
- Placing a manufactured home on a site.
- Placing a recreational vehicle or travel trailer on a site for more than 180 days.

B. Flood Protection Standards

1. All new structures and substantial improvements shall have the lowest floor, including basement, elevated above the FPE.
2. The structure shall be aligned parallel with the direction of flood flows where practicable.
3. The structure shall be anchored to prevent flotation, collapse, or lateral movement of the structure.
4. 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.
5. Electrical, heating, ventilation, ductwork, plumbing, and air-conditioning equipment and other service facilities shall be elevated above the FPE. Water, sewage, electrical, and other utility lines below the FPE shall be constructed to prevent water from entering or accumulating within them during conditions of flooding.
6. Fully enclosed areas below the lowest floor that are subject to flooding 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:
 - a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
 - b. The bottom of all openings shall be no higher than one foot above grade.
 - c. Openings may be equipped with screens, louvers, or other coverings or devices if they permit the automatic entry and exit of floodwaters.
7. In Zones V, V1-30 and VE, new structures and substantial improvements shall be elevated on pilings or columns so that:
 - a. 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.
 - b. The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated above the FPE.
 - c. 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).

- d. The areas below the lowest floor that are subject to flooding shall be free of obstruction.
 - e. The structure or improvement shall be located landward of the reach of mean high tide.
 - f. The use of fill for structural support of a structure or addition is prohibited.

C. Nonresidential Construction

- 1. New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall be elevated in accordance with Section 13.12.500.A.
- 2. 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. The structure is not located in Zones V, V1-30, or VE; and
 - b. Below the FPE the structure is watertight with walls substantially impermeable to the passage of water; and
 - c. The structural components are capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
 - d. 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 Director as set forth in Sections 13.12.800.A.2 and 13.12.700.E.1.a.

D. Manufactured Homes

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

- 1. Elevated on a permanent foundation in accordance with Section 13.12.500.B, and
- 2. Securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement. 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.

E. Recreational Vehicles

Recreational vehicles placed on sites shall:

- 1. Be on the site for fewer than 180 consecutive days, or
- 2. 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
- 3. Meet the requirements of Section 13.12.500.A above.

F. 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 13.12.500.A.1, provided:

1. It is used only for parking or storage;
2. It is constructed and placed on the building site so as to offer minimum resistance to the flow of floodwaters;
3. It is anchored to prevent flotation which may result in damage to other structures;
4. All portions of the structure below the FPE must be constructed of flood-resistant materials;
5. Service utilities such as electrical and heating equipment meet the standards of Sections 13.12.500.A.5 and 13.12.500.F;
6. It has openings to allow free flowage of water that meet the criteria in Section 13.12.500.A.6;
7. The project meets all the other requirements of this chapter, including Section 13.12.600.

G. Utilities

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems;
2. Water wells shall be located outside the floodway and shall be protected to the FPE;
3. 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.

13.12.600. Habitat Protection Standards

A. The provisions of this Section apply in the Regulatory Floodplain. Activities listed herein must meet all Federal, State, and City of Shoreline requirements.

B. Native Vegetation

1. The site plan required in Section 13.12.700.D shall show existing native vegetation.
2. In the riparian habitat zone, native vegetation shall be left undisturbed, except as provided in 13.12.700.C and 13.12.700.B.3.
3. 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 Regulatory Floodplain. Native vegetation in the riparian habitat zone portion of the property can be counted toward this requirement.
4. If the proposed project does not meet the criteria of Section 13.12.600.A.1 and Section 13.12.600.A.2, a habitat impact assessment shall be conducted pursuant to Section 13.12.600.E and, if necessary, a habitat mitigation plan shall be prepared and implemented pursuant to Section 13.12.600.F.

C. Floodway Standards

1. In addition to the other requirements of this chapter, a project to develop in the floodway as delineated pursuant to Sections 13.12.300.C.5, 13.12.300.C.6, or 13.12.300.E.4 shall meet the following criteria:
 - a. 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.
 - b. Construction or reconstruction of residential structures is prohibited within designated floodways, except for the following. The following exceptions must meet all other requirements in the chapter, including Section 13.12.600.B.1.a.
 - 1) Repairs, reconstruction, or improvements to a residential structure which 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 which 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, may be excluded from the 50 percent calculations.
 - 2) 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
 - 3) Repairs, reconstruction, or improvements to residential structures identified as historic structures that do not increase the building's dimensions.
2. In riverine Special Flood Hazard Areas where a floodway has not been delineated pursuant to Sections 13.12.300.C.5, 13.12.300.C.6, or 13.12.300.E.4, 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 0.01 feet.

D. Compensatory Storage

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

1. 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;
2. Be hydraulically connected to the source of flooding; and

3. Provide compensatory storage in the same construction season as when the displacement of flood storage volume occurs and before the flood season begins.
4. The newly created storage area shall be graded and vegetated to allow fish access during flood events without creating fish stranding sites.

E. Alteration of Watercourses

1. In addition to the other requirements in this Section 13.12.600, an applicant for a project that will alter or relocate a watercourse shall also submit a request for a Conditional Letter of Map Revision (CLOMR), where required by the Federal Emergency Management Agency. 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.
2. The Director shall notify adjacent communities and the Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
3. Maintenance shall be provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is 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.

F. Habitat Impact Assessment

Unless allowed under Sections 13.12.700.B and 13.12.700.C, a permit application to develop in the Regulatory Floodplain 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 performed by a qualified professional as defined by SMC chapter 20.20.042 who is approved by the City or under contract to the City: The assessment shall be:

1. A Biological Evaluation or Biological Assessment developed per 50 CFR 402.12 to initiate Federal Interagency consultation under Endangered Species Act section 7(a)(2); or
2. Documentation that the activity fits within Section 4(d) of the Endangered Species Act; or
3. 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
4. An assessment prepared in accordance with *Floodplain Habitat Assessment and Mitigation Draft Regional Guidance, 2011*, FEMA Region 10. The assessment shall determine if the project would adversely affect:
 - a. Species that are Federal, state, or local listed as threatened or endangered.
 - b. The primary constituent elements for critical habitat, when designated,
 - c. Essential Fish Habitat designated by the National Marine Fisheries Service,

- d. Fish and wildlife habitat conservation areas,
- e. Other protected areas and elements necessary for species conservation.

G. Habitat Mitigation Plan

1. If the assessment conducted under Section 13.12.600.E 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 *Floodplain Habitat Assessment and Mitigation Draft Regional Guidance, 2011*, FEMA Region 10.
 - a. If the USFWS or NMFS issues an Incidental Take Permit under Section 10 ESA, Biological Opinion under Section 13.12.600.E, ESA; the permit can be considered to qualify as a plan to mitigate those impacts.
 - b. If the project is located outside the Protected Area, the mitigation plan shall include such avoidance, minimization, restoration, or compensation measures so that indirect adverse effects of development in the floodplain (effects to stormwater, riparian vegetation, bank stability, channel migration, hyporheic zones, wetlands, large woody debris, etc.) are mitigated such that equivalent or better habitat protection is provided.
 - c. No new stream crossings are allowed outside the Protected Area unless approval has been obtained as stated in Section 13.12.600.F.1.a.
 - d. 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.
2. 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.
3. As required in Section 13.12.700.E the Building Official 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 13.12.700.E.2.

13.12.700 Permits

A. Floodplain Development Permit

1. For all applicable development within the regulatory floodplain, a floodplain development permit shall be obtained before construction or development occurs.
2. Activities allowed by SMC Title 20 Shoreline Development Code are allowed, provided they meet all the other requirements of this chapter, including the analysis required in Section 13.12.600.B and the habitat impact assessment required under Section 13.12.600.E, a floodplain development permit is issued, and all other Federal, State, and local requirements are met.
3. A floodplain development permit is a Type A permit administered according to SMC 20.30.040, except that the Director shall approve extensions beyond 180 days following complete application and following issuance.

4. All activities within the Regulatory Floodplain must meet all applicable Federal, State, and local requirements.

B. Permit Required

The following activities require a floodplain development permit and are allowed in the Regulatory Floodplain without the analysis required in Section 13.12.600.B or the habitat impact assessment required under Section 13.12.600.E, providing all other requirements are met, including Federal, State, and local requirements:

1. Repair or remodeling of an existing structure, if the repair or remodeling is not a substantial improvement, or a repair of substantial damage.
2. 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 counted cumulatively from September 22, 2011. If the structure is in the floodway, there shall be no change in the dimensions perpendicular to flow.
3. Activities with the sole purpose of creating, restoring, or enhancing natural functions associated with floodplains, streams, lakes, estuaries, marine areas, habitat, and riparian areas, provided the activities do not include structures, grading, fill, or impervious surfaces.
4. Development of open space and recreational facilities, such as parks, and trails, 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 Regulatory Floodplain.
5. Repair to onsite septic systems provided the ground disturbance is the minimal necessary.

C. Permit Exemptions

Activities that do not meet the definition of “development” SMC Chapter 13.12.105 are allowed in the Regulatory Floodplain and do not require a floodplain development permit. The following are examples of activities not considered development or “man-made changes to improved or unimproved real estate.”

1. Routine maintenance of landscaping that does not involve grading, excavation, or filling;
2. Removal of noxious weeds and replacement of nonnative vegetation with native vegetation;
3. Removal of hazard trees consistent with the requirements of SMC 20.50.310(1) or SMC 20.80.030(H);
4. Normal maintenance of structures, such as reroofing and replacing siding, provided such work does not qualify as a substantial improvement;
5. Normal maintenance of above ground utilities and facilities, such as replacing downed power lines and utility poles;
6. Normal street and road maintenance, including filling potholes, repaving, and installing signs and traffic signals, but not including expansion of paved areas;
7. Normal maintenance of a levee or other flood control facility prescribed in the operations and maintenance plan for the levee or flood control facility are allowed in the Regulatory

Floodplain without need for a floodplain development permit. Normal maintenance does not include repair from flood damage, expansion of the prism, expansion of the face or toe or addition for protection on the face or toe with rock armor;

8. Alterations in response to emergencies which threaten the public health, safety and welfare or which pose and imminent risk of damage to private property consistent with the requirements of SMC 20.80.030(A);
9. Normal maintenance, operation or repair of publically improved recreation areas as long as any such activity does not include expansion of uses and or facilities into a previously unimproved portion of the regulatory floodplain and are consistent with the standards of Title 20.80 Critical areas, best available science or adaptive management plans as recognized by the City; and
10. Site investigative work and studies necessary for preparing land use applications.

D. Floodplain Development Permit Application

Application for a floodplain development permit shall be made on forms furnished by the Director and shall include, but shall not be limited to, all of the following that are applicable,:

1. Assessment of the impact on those factors that contribute to increased flood hazard and degradation of habitat. If the assessment concludes that the project will cause an adverse effect outside the Protected Area, the permit will be denied unless the project impacts are mitigated (avoided, rectified or compensated).
2. A description of the extent to which a stream, lake, or other water body, including its shoreline, will be altered or relocated as a result of the proposed development.
3. Documentation that the applicant will apply for all necessary permits required by Federal, and State law. The application shall include written acknowledgment that the applicant understands that the final certification of use or certificate of occupancy will be issued only if the applicant provides copies of the required Federal, and State permits or letters stating that a permit is not required. The floodplain permit is not valid if those other permits and approvals are not obtained prior to any ground disturbing work or structural improvements.
4. Acknowledgment by the applicant that representatives of any Federal, or State unit of government with regulatory authority over the project are authorized to enter upon the property to inspect the development.
5. Site plan(s), meeting City criteria and showing:
 - a. The nature, location, dimensions, and elevations of the property in question;
 - b. Names and location of all lakes, water bodies, water-ways and drainage facilities within 300 feet of the site;
 - c. The elevations of the 10-, 50-, 100-, and 500-year floods, where the data are available. Elevation datum shall be the North America Vertical Datum of 1998 (NAVD 1988) with conversions provided as needed;
 - d. The boundaries of the Regulatory Floodplain, SFHA, floodway, riparian habitat zone, and channel migration area, delineated in accordance with Section 13.12.300;

- e. The proposed drainage system including, but not limited to storm sewers, overland flow paths, detention facilities and roads;
 - f. Existing and proposed structures, fill, pavement and other impervious surfaces, and sites for storage of materials;
 - g. All wetlands and the required buffers;
 - h. The riparian habitat zone for all development proposals within 300 feet of any stream or shoreline;
 - i. Designated fish and wildlife habitat conservation areas, and habitat areas identified for conservation or protection under state or federal or local laws or regulations, for example Endangered Species Act, Magnuson-Stevens Fishery Conservation and Management Act, Growth Management Act, Shorelines Management Act, or Priority Habitat and Species List;
 - j. Existing native vegetation and proposed revegetation.
6. If the proposed project involves grading, excavation, or filling, the site plan shall include proposed post-development terrain at one-foot contour intervals within the SFHA.
 7. If the proposed project includes a new structure, substantial improvement, or repairs to a substantially damaged structure that will be elevated, the application shall include the Flood Protection Elevation for the building site and the proposed elevations of the following:
 - a. The top of bottom floor, including basement, crawl space, or enclosure floor,
 - b. The top of the next higher floor,
 - c. The bottom of the lowest horizontal structural member (in V Zones only),
 - d. The top of the slab of an attached garage,
 - e. The lowest elevation of machinery or equipment servicing the structure,
 - f. The lowest adjacent (finished) grade next to structure,
 - g. The highest adjacent (finished) grade next to structure,
 - h. The lowest adjacent grade at the lowest elevation of a deck or stairs, including structural support,
 8. If the proposed project includes a new structure, substantial improvement, or repairs to a substantially damaged nonresidential structure that will be dry floodproofed, the application shall include the FPE for the building site and the elevation in relation to the datum of the effective FIRM to which the structure will be dry floodproofed, along with a certification by a registered professional engineer or licensed architect that the dry floodproofing methods meet the floodproofing criteria in Section 13.12.500.B.
 9. The proposed project must be designed and located so that new structural flood protection is not needed.

E. Certificate of Occupancy

1. The Building Official shall not issue certificate of occupancy or final a building permit for a new or substantially improved structure or an addition until:
 - a. The Permittee provides a properly completed Elevation or Floodproofing Certificate showing finished construction data as required by Section 13.12.800.A;
 - b. All work identified in a mitigation plan required by Sections 13.12.600.E and 13.12.600.F has been completed according to the plan's schedule;
 - c. The Permittee provides copies of all required Federal, State, and local permits noted in the permit application per Section 13.12.700.D.2;
 - d. All other provisions of this chapter have been met.
2. The Director may accept a financial guarantee, in an amount determined by the Director, to ensure completion of portions of the project following issuance of the certification of use or certificate of occupancy.

13.12.800 Administration**A. Records**

The Director shall retain the following records:

1. All records pertaining to the provisions of this chapter.
2. Where base flood elevation data have been obtained pursuant to Sections 13.12.300.C and 13.12.300.E, the Director shall obtain, record, and maintain the actual "finished construction" elevations for the locations listed in Section 13.12.600.C. This information shall be recorded on a current FEMA Elevation Certificate (FEMA Form 81-31), signed, and sealed by a professional land surveyor, currently licensed in the State of Washington.
3. For all new or substantially improved dry floodproofed nonresidential structures, where base flood elevation data has been obtained pursuant to Sections 13.12.300.C and 13.12.300.E, the Director shall obtain, record and maintain the elevation (in relation to the datum of the effective FIRM) to which the structure was floodproofed. This information shall be recorded on a current FEMA Floodproofing Certificate (FEMA Form 81-65), professional engineer, currently licensed in the State of Washington.

B. Appeals

Any requirement, decision, or determination made by the Director in the enforcement or administration of this chapter is appealable according to the procedures described in SMC Chapters 20.30.200 through 20.30.270.

C. Floodplain Variance

1. Each floodplain variance pertains to a physical piece of property. The variance is not personal in nature and is not based on the inhabitants or their health, economic, or financial circumstances.
2. The Director shall review and decide on requests for variances from the requirements of this chapter.

3. Upon consideration of the following criteria and the purposes of this chapter, the Director may attach such conditions to the granting of the floodplain variance as deemed necessary to further the purposes of this chapter.
4. Criteria
 - a. No floodplain variance shall be granted to the requirements of this chapter unless the applicant demonstrates that:
 - 1) The development project cannot be located outside the Regulatory Floodplain;
 - 2) An exceptional hardship would result if the variance were not granted;
 - 3) The relief requested is the minimum necessary;
 - 4) The applicant's circumstances are unique and do not represent a problem faced by other area properties;
 - 5) If the project is within a designated floodway, no increase in flood levels during the base flood discharge would result;
 - 6) The project will not adversely affect features or quality of habitat supporting local, state or federally protected fish or wildlife;
 - 7) There will be no additional threat to public health, safety, beneficial stream or water uses and functions, or creation of a nuisance;
 - 8) There will be no additional public expense for flood protection, lost environmental functions, rescue or relief operations, policing, or repairs to streambeds, shorelines, banks, roads, utilities, or other public facilities; and
 - 9) All requirements of other permitting agencies will still be met.
 - b. In reviewing applications for a floodplain variance, the Director shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter, and:
 - 1) The danger to life and property due to flooding or erosion damage;
 - 2) The danger that materials may be swept onto other lands to the injury of others;
 - 3) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - 4) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;
 - 5) The susceptibility of the proposed facility and its contents to flood or erosion damage and the effect of such damage on the individual owner;
 - 6) The availability of alternative locations for the proposed use which are not subject to flooding or channel migration and are not in designated fish and wildlife habitat conservation areas;
 - 7) The relationship of the proposed use to the comprehensive plan, growth management regulations, critical area regulations, the shoreline management program, and floodplain management program for that area;

- 8) 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;
 - 9) The potential of the proposed development project to destroy or adversely affect a fish and wildlife habitat conservation area or create an adverse effect to federal, state or locally protected species or habitat; and
 - 10) The potential of the proposed development project to affect, or be affected by, channel migration;
 - 11) Must be compliant with the ESA.
- c. A floodplain variance requested in connection with restoration of a historic site, building, or structure may be granted using criteria more permissive than the above requirements, provided:
 - 1) The repair or rehabilitation is the minimum necessary to preserve the historic character and design of the site, building or structure; and
 - 2) The repair or rehabilitation will not result in the site, building, or structure losing its historic designation.
 - d. A floodplain variance may be requested for new construction, substantial improvements, and other development necessary for the conduct of functionally dependent uses provided:
 - 1) There is good and sufficient cause for providing relief;
 - 2) The variance does not cause a rise in the 100 year flood level within the regulatory floodway;
 - e. A floodplain variance to the provisions of Section 13.12.500 of this chapter may be issued for a structure on a small or irregularly shaped lot contiguous to and surrounded by lots with existing structures constructed below the FPE, providing the other variance criteria are met. The applicant for such a variance shall be notified, in writing, that the structure (i) will be subject to increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and (ii) such construction below the FPE increases risks to life and property. Such notification shall be maintained with a record of all variance actions.

D. Violations

Any activity or action caused or permitted to exist in violation of this chapter is a threat to public health, safety, and welfare, and is declared and deemed a public nuisance. Such violations are subject to enforcement under SMC 20.30.720 through 20.30.790. No development shall be undertaken or placed in the areas regulated by this chapter without full compliance with the terms of this chapter and other applicable regulations of the City of Shoreline.

E. Interpretation

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

- 1. Considered as minimum requirements;
- 2. Liberally construed in favor of the City; and,

3. Deemed neither to limit nor to repeal any other powers granted under State statutes.

F. Abrogation and Greater Restrictions

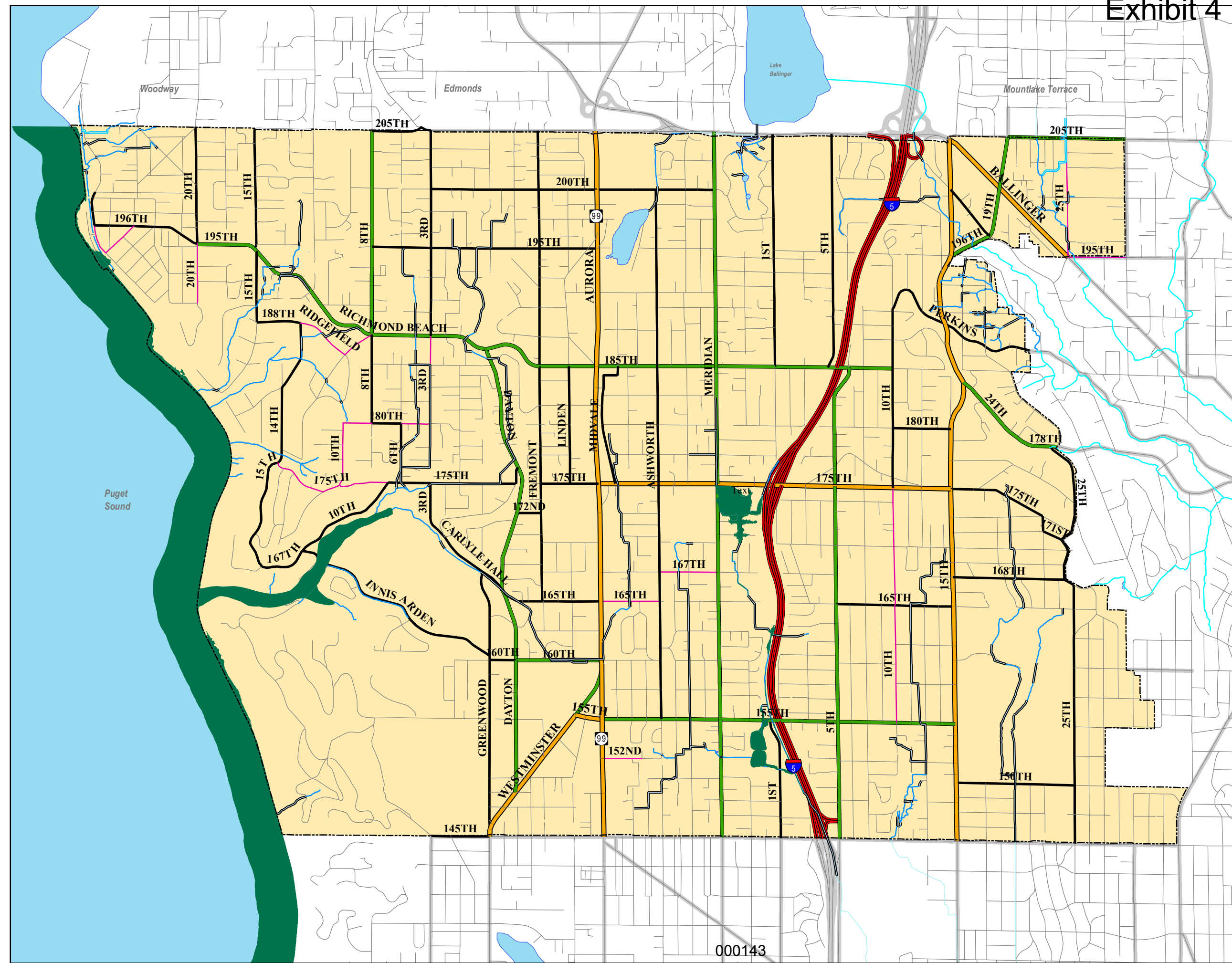
This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, deed restrictions, codes, or ordinances. However, where this chapter and another code, ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

G. Warning and Disclaimer of Liability

The degree of property and habitat protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods and movement of channels outside of mapped channel migration areas can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the regulated areas or development permitted within such areas will be free from flood or erosion damage. This chapter shall not create liability on the part of City of Shoreline or any officer or employee thereof for any damage to property or habitat that result from reliance on this chapter or any administrative decision lawfully made hereunder.

H. Severability

The provisions and sections of this chapter shall be deemed separable and the invalidity of any portion of this chapter shall not affect the validity of the remainder.



SHORELINE
Geographic Information System
Flood Hazard Zones
(FIRM data)

Legend

- City Boundary - outline
- Flood Hazard Areas

Streams

- Open Water Course
- Outside City
- Piped Water Course
- Stream through Ronald Bog
- Stream through Twin Ponds
- Unclassified
- Undocumented
- Open Water

Street Classification, 2011

- Outside Shoreline
- Interstate
- Principal Arterial
- Minor Arterial
- Collector Arterial
- Local Primary Street
- Local Secondary Street

Map Date:
4/16/2012 11:43:24 AM

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fitness, or merchantability,
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SHORELINE

Geographic Information System
Flood Hazard Zones
(FIRM data)
Boeing Creek
&
Puget Sound shoreline

Legend

City Boundary - outline

Flood Zone

X (old)

A

AE

AH

AO

VE

X (new)

Streams

Open Water Course

Outside City

Piped Water Course

Stream through Ronald Bog

Stream through Twin Ponds

Unclassified

Undocumented

Street Classification, 2011

Outside Shoreline

Interstate

Principal Arterial

Minor Arterial

Collector Arterial

Local Primary Street

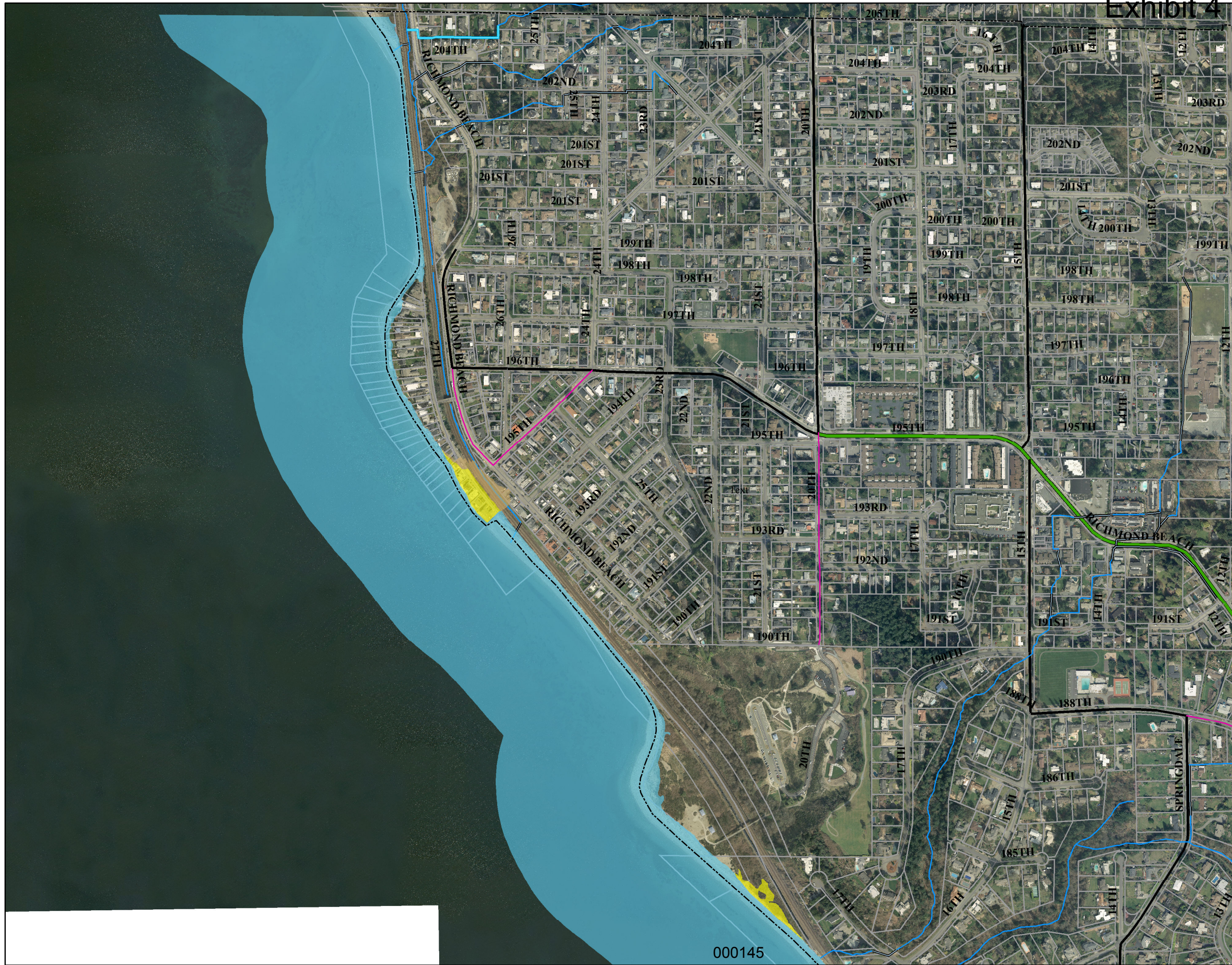
Local Secondary Street

Tax Parcel

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 fitness, or merchantability,
 accompany this product.





SHORELINE

Geographic Information System

Flood Hazard Zones (FIRM data)

North Puget Sound shoreline

Legend

- City Boundary - outline
- Flood Zone
 - X (old)
 - A
 - AE
 - AH
 - AO
 - VE
 - X (new)
- Streams
 - Open Water Course
 - Outside City
 - Piped Water Course
 - Stream through Ronald Bog
 - Stream through Twin Ponds
 - Unclassified
 - Undocumented
- Street Classification, 2011
 - Outside Shoreline
 - Interstate
 - Principal Arterial
 - Minor Arterial
 - Collector Arterial
 - Local Primary Street
 - Local Secondary Street
 - Tax Parcel

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4/16/2012 11:40:22 AM

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Thornton Creek North portion

Legend

 **City Boundary - outline**

Flood Zone

- X (old)
- A
- AE
- AH
- AO
- VE
- X (new)

Streams

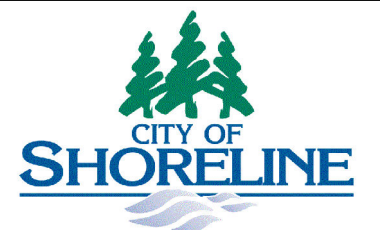
- Open Water Course
- Outside City
- Piped Water Course
- Stream through Ronald Bog
- Stream through Twin Ponds
- Unclassified
- Undocumented

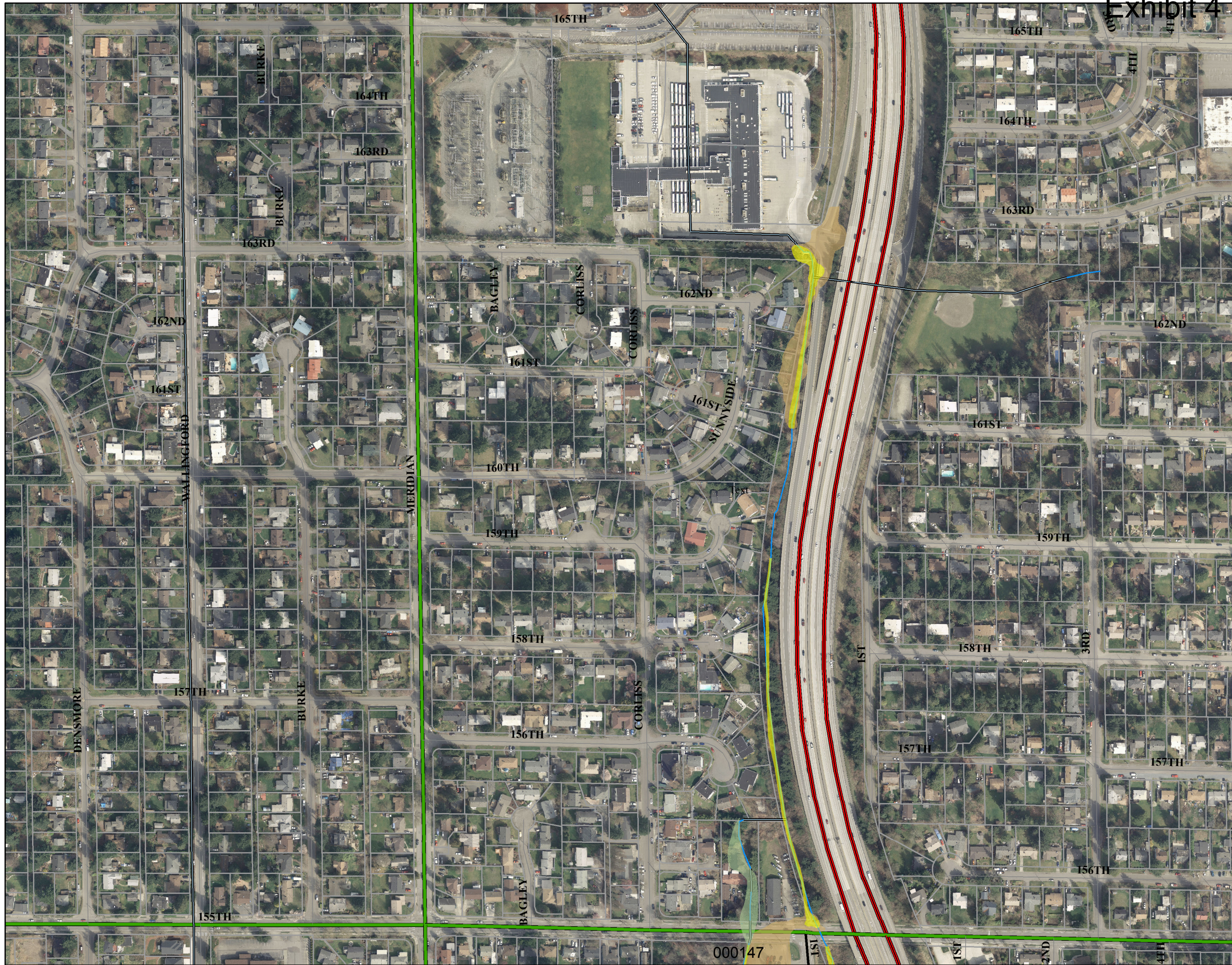
Street Classification, 2011

- Outside Shoreline
- ▬ Interstate
- ▬ Principal Arterial
- ▬ Minor Arterial
- ▬ Collector Arterial
- ▬ Local Primary Street
- ▬ Local Secondary Street
- ▬ **Tax Parcel**

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SHORELINE

Geographic Information System
Flood Hazard Zones
(FIRM data)

Thornton Creek
Middle portion

Legend

City Boundary - outline

Flood Zone

X (old)

A

AE

AH

AO

VE

X (new)

Streams

Open Water Course

Outside City

Piped Water Course

Stream through Ronald Bog

Stream through Twin Ponds

Unclassified

Undocumented

Street Classification, 2011

Outside Shoreline

Interstate

Principal Arterial

Minor Arterial

Collector Arterial

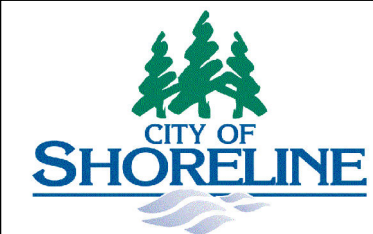
Local Primary Street

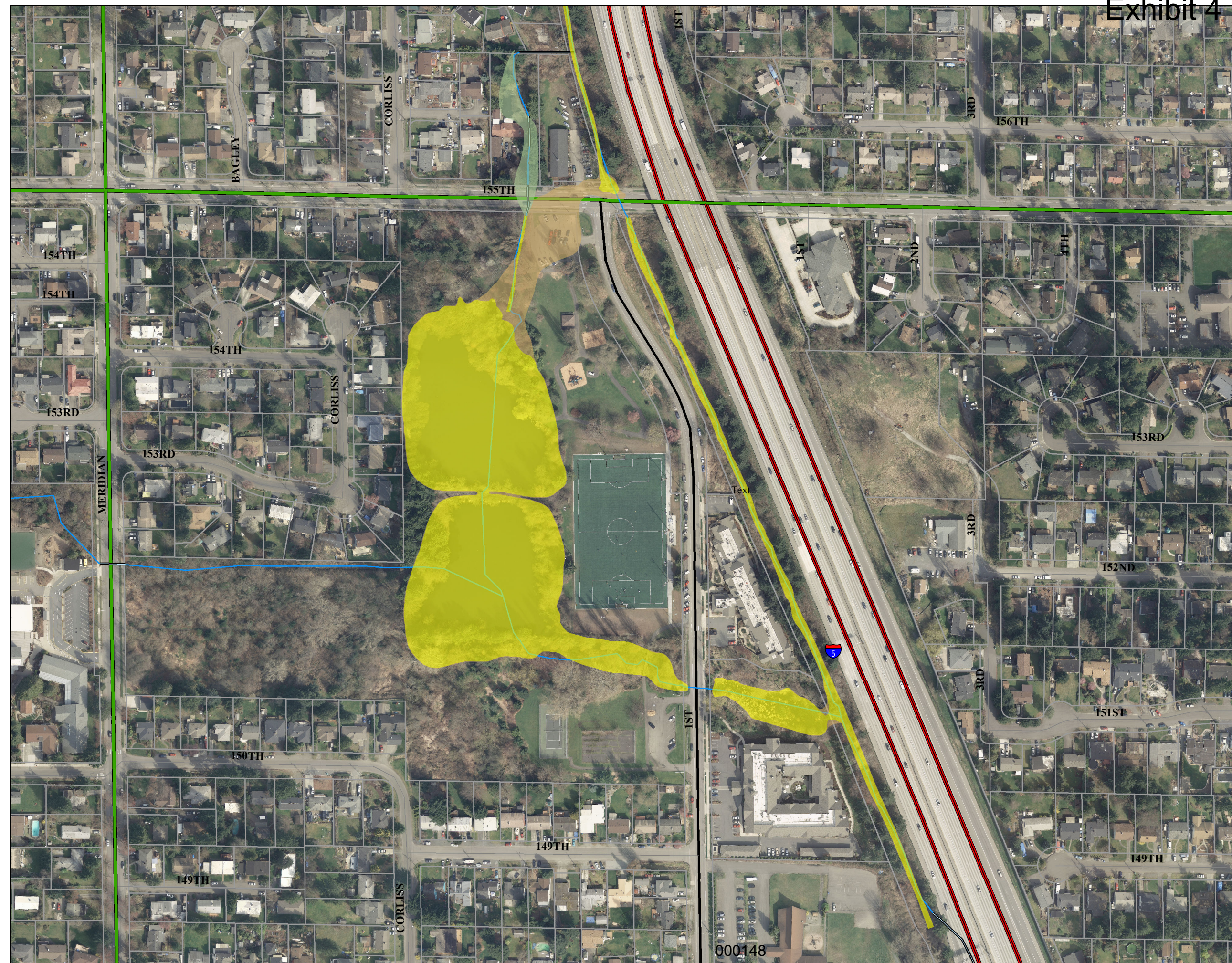
Local Secondary Street

Tax Parcel

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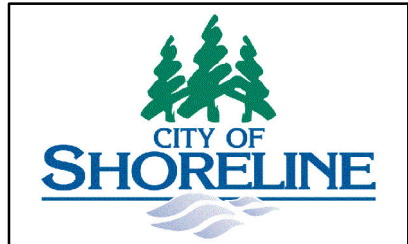
SHORELINE
Geographic Information System
Flood Hazard Zones
(FIRM data)

Thornton Creek
South portion

- Legend**
- City Boundary - outline
 - Flood Zone**
 - X (old)
 - A
 - AE
 - AH
 - AO
 - VE
 - X (new)
 - Streams**
 - Open Water Course
 - Outside City
 - Piped Water Course
 - Stream through Ronald Bog
 - Stream through Twin Ponds
 - Unclassified
 - Undocumented
 - Street Classification, 2011**
 - Outside Shoreline
 - Interstate
 - Principal Arterial
 - Minor Arterial
 - Collector Arterial
 - Local Primary Street
 - Local Secondary Street
 - Tax Parcel

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4/16/2012 11:32:12 AM

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Planning and Community Development

17500 Midvale Avenue N
Shoreline, WA 98133-4905
(206) 801-2500 ♦ Fax (206) 801-2788

SEPA THRESHOLD DETERMINATION DETERMINATION OF NONSIGNIFICANCE (DNS) Floodplain Management Ordinance Update

PROJECT INFORMATION

**Proposed Project
Description:**

In response to direction from the Federal Emergency Management Agency (FEMA) a proposed Floodplain Management Ordinance (FMO) has been drafted to replace current Chapter 16.12 SMC Flood Damage Prevention. The proposed FMO will bring the City's regulations into compliance with the Endangered Species Act (ESA) and maintain the community's eligibility for the National Flood Insurance Program (NFIP). Replacement of this chapter requires associated changes to SMC Title 20 Development Code.

The FMO is a citywide nonproject action that would affect activities, uses, and developments in the mapped regulatory floodplain within the city limits. As defined in the FMO and identified on the applicable Flood Insurance Rate Maps (FIRMS) the areas in Shoreline where these regulations apply include the Puget Sound shoreline and portions of Boeing Creek and Thornton Creek basins. The Puget Sound shoreline adjacent to the Point Wells area (in unincorporated Snohomish County) would also be regulated if it annexes to the City.

Project Number:

Not Applicable (Nonproject Action)

Date of Issuance:

April 18, 2012

Applicant:

City of Shoreline

Location:

City of Shoreline: City-wide

Planning Commission

Public Hearing Date:

May 3, 2012 – Title 20 SMC Development Code changes only

City Council tentative

Public Hearing Date:

June 25, 2012

SEPA THRESHOLD DETERMINATION OF NONSIGNIFICANCE (DNS)

The City of Shoreline has determined that the proposal will not have a probable significant adverse impact on the environment. The DNS is issued in accordance with WAC 197-11-340(2). The City will not act on this proposal for at least 14 days from the date of issuance. This decision was made after review of the environmental checklist, the draft ordinance and other information on file with the City. The information is available to the public upon request at no charge. The draft ordinance, proposed Title 20 Development Code changes, maps of the regulatory floodplain, and environmental checklist can be reviewed on the city's website at:

<http://shorelinewa.gov/floodplain>

PUBLIC COMMENT AND APPEAL INFORMATION

Written comments on the environmental impacts of the proposal are being accepted. Written comments must be received at the address listed below before 5:00 p.m. May 3, 2012. Please mail, fax (206) 801-2788 or deliver comments to the City of Shoreline, Attn: Juniper Nammi, AICP, Associate Planner, 17500 Midvale Avenue North, Shoreline, WA 98133, or emailed to jnammi@shorelinewa.gov. Interested persons are encouraged to provide oral and/or written comments regarding the above proposal at an open record public hearing. The hearing is scheduled for May 3, 2012 at 7:00 pm in the Council Chambers at City Hall, 17500 Midvale Avenue N, Shoreline, WA.

APPEAL INFORMATION

There is no administrative appeal available for this decision. The SEPA Threshold Determination may be appealed with the decision on the underlying action to superior court. If there is not a statutory time limit in filing a judicial appeal, the appeal must be filed within 21 calendar days following the issuance of the decision on the underlying action in accordance with State law.

The project file is available for review at the City Hall 17500 Midvale Avenue N, 1st Floor – Planning & Community Development. For specific project questions, contact Juniper Nammi, AICP, City of Shoreline Planning and Community Development at 206-801-2525.

SEPA RESPONSIBLE OFFICIAL

RESPONSIBLE OFFICIAL: Rachael Markle, AICP, Director of Planning & Community Development

ADDRESS: 17500 Midvale Avenue North
Shoreline, WA 98133-4905

PHONE: 206-801-2531

DATE:

4-june-12

SIGNATURE:

Rachael E. Markle



Planning & Community Development

STATE ENVIRONMENTAL POLICY ACT (SEPA) ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write “do not know” or “does not apply”. Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Public notice is required for all projects reviewed under SEPA. Please submit current Assessor's Maps/Mailing Labels showing:

- Subject property outlined in red.
- Adjoining properties under the same ownership outlined in yellow.
- All properties within 500' of the subject property, with mailing labels for each owner.

NOTE: King County no longer provides mailing label services. Planning and Development Services can provide this for a fee or provide you instructions on how to obtain this information and create a mail merge document to produce two sets of mailing labels for your application.

Use of Checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered “does not apply”. IN ADDITION complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words “project,” “applicant,” and “property or site” should be read as “proposal,” “propose,” and “affected geographic area,” respectively.

17500 Midvale Avenue North, Shoreline, Washington 98133-4905

Telephone (206) 801-2500 Fax (206) 801-2788 pcd@shorelinewa.gov

The Development Code (Title 20) is located at mrsc.org

Part Eleven – 197-11-960**SEPA Rules****TO BE COMPLETED
BY APPLICANT****EVALUATION FOR
AGENCY USE ONLY****A. BACKGROUND**

1. Name of proposed project, if applicable:
Floodplain Management Ordinance (FMO) and related Shoreline Municipal Code (SMC) Title 20 Development Code amendments.
2. Name of applicant:
City of Shoreline
3. Address and phone number of applicant and contact person:
Juniper Nami, AICP
17500 Midvale Ave N
Shoreline, WA 98133-4905
206-801-2525
4. Date checklist prepared:
April 10, 2012
5. Agency requesting checklist:
City of Shoreline
6. Proposed timing or schedule (including phasing, if applicable):
April 18 to May 3, 2012 - Optional DNS and Planning Commission Public Hearing Notice and public comment period.

Planning Commission Public Hearing May 3, 2012.

June 8 to June 25, 2012 - City Council Public Hearing Notice and public comment period. Tentative City Council Hearing June 4, 2012 with anticipated adoption June 25, 2012
7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
No additional changes to these regulations are identified for the foreseeable future. Required updates to the floodplain regulations are at the direction of the Federal Emergency Management Agency (FEMA) and the Washington State Department of Ecology.
8. List any environmental information you know about that has been prepared or will be prepared, directly related to this proposal.
Incorporated King County Coastal Flood Hazard Study (Jan. 2012)
Shoreline Master Program Cumulative Impacts Analysis (Mar. 2012)
Flood Insurance Mapping Study for North Branch Thornton Creek (Ronald Bog to Interstate 5) (December 2009)
Boeing Creek Basin Characterization Report (May 2004)

1/2012

17500 Midvale Avenue North, Shoreline, Washington 98133-4905Telephone (206) 801-2500 Fax 206-801-2788 pcd@shorelinewa.govThe Development Code (Title 20) is located at mrsc.org

Part Eleven – 197-11-960

SEPA Rules

TO BE COMPLETED
BY APPLICANTEVALUATION FOR
AGENCY USE ONLY

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
Federal Emergency Management Agency (FEMA) approval of proposed map revisions.

10. List any government approvals or permits that will be needed for your proposal, if known.
The FMO and associated development code amendments will require the following approvals:
 - Planning Commission recommendation on development code amendments,
 - SEPA review and threshold determination for non-project action,
 - Final legislative adoption by Shoreline City Council, and
 - FEMA must approve adopted ordinance.

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description).
The FMO is a citywide non-project action that would affect activities, uses, and developments in the mapped regulatory floodplain within the city limits. As defined in the FMO and identified on the applicable Flood Insurance Rate Maps the areas in Shoreline where these regulations apply include the Puget Sound shoreline and portions of Boeing Creek and Thornton Creek basins. The Puget Sound shoreline adjacent to the Point Wells area (in unincorporated Snohomish County) would also be regulated if it annexes to the City.

In response to direction from FEMA a proposed Floodplain Management Ordinance (FMO) has been drafted to replace current Chapter 16.12 SMC Flood Damage Prevention. The proposed FMO will bring the City's regulations into compliance with the Endangered Species Act (ESA) and maintain the communities eligibility for the National Flood Insurance Program (NFIP). Replacement of this chapter requires associated changes to SMC Title 20 Development Code.

The proposed FMO differs from existing regulations in four significant ways:

- 1) Consolidates regulations that are currently located in both the Flood Damage Prevention and the Flood Hazard Areas section of the Critical Areas regulations,
- 2) Redefines the regulatory floodplain to include riparian habitat zones and channel migration areas based on best available science,
- 3) Adds new standards for habitat protection based on best

available science, and

4) Transfers the responsibility for administration of these regulations from the Planning & Community Development Director to the Public Works Director.

- 12. Location of the proposal.** Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The regulations are effective City-wide. However they are triggered only in the regulatory floodplain as defined in the FMO and mapped on the applicable FIRMs. With the proposed map updates currently being reviewed by FEMA, the regulatory floodplain will include areas along the Puget Sound shoreline, in the Boeing Creek basin and the Thornton Creek Basin. The Puget Sound shoreline adjacent to the Point Wells area (in unincorporated Snohomish County) would also be regulated if it annexes to the City.

Part Eleven – 197-11-960

SEPA Rules

TO BE COMPLETED
BY APPLICANTEVALUATION FOR
AGENCY USE ONLY

B. ENVIRONMENTAL ELEMENTS

1. Earth:

- a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other: The areas included in the regulatory floodplains in Shoreline are predominately flat or moderate to steep sloped ravines or bluffs.
- b. What is the steepest slope on the site (approximate percent of slope).
>100%
- c. What general types of soils are found on the site (for example clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.
Predominant types of soils found across the City include: Everett Gravelly sandy loam and Alderwood gravelly sandy loam. Other soils present, typically at 4% of area or less, include: Carbondale muck, Norma fine sandy loam, Kitsap silt loam, and Rifle peat.
- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so describe.
The west-facing slopes along Puget Sound within the City have experienced recent and historical landslide activity. The contact zone between the hard clay layer and the overlying sand layer is the source of many landslides along the coast of Puget Sound, which commonly occur after major storm events. In general, slope stability in the City's shoreline planning area is more stable in the northern portion, though containing some isolated unstable areas, and unstable in the southern portion.
- The soils in the regulatory floodplain and adjacent slopes of the Boeing Creek basin have been identified as slide prone soils. In this area advanced outwash sands overlay transition bed clays that result in perched groundwater that has created areas of slope failures. No recent analysis of these failures is available.
- The geology in the Thornton Creek basin do not include any significant steep ravines or bluffs, nor are the soils identified as slide prone.
- e. Describe the purpose, type and approximate quantities of any filling or grading proposed. Indicate source of fill.
NA - NONPROJECT ACTION
- f. Could erosion occur as a result of clearing construction or use? If so generally describe.
NA - NONPROJECT ACTION

- g. About what percent of the site will be covered with hardscape after project construction (for example asphalt or buildings)?

NA - NONPROJECT ACTION

- h. Proposed measures to reduce or control erosion , or other impacts to the earth, if any:

NA - NONPROJECT ACTION

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- a. What types of emissions to the air would result from the proposal (i.e. dust, automobile, odors, industrial, wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

NA - NONPROJECT ACTION

- b. Are there any off site sources of emissions or odor that may affect your proposal? If so, generally describe.

NA - NONPROJECT ACTION

- c. Proposed measures to reduce or control emissions or other impacts to air if any:

NA - NONPROJECT ACTION

3. Water:**a. Surface:**

1. Is there any surface water body on or in the immediate vicinity of the site (including year round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Puget Sound - saltwater

Boeing Creek and associated tributaries - year round and seasonal streams which flow into Puget Sound

Thornton Creek and associated tributaries - year round and seasonal streams which flow into Lake Washington

Ronald Bog - openwater wetland which flows into Thornton Creek

2. Will the project require any work over, in, or adjacent to (within 200') of the described waters? If yes, please describe and attach available plans.

NA - NONPROJECT ACTION

3. Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

NA - NONPROJECT ACTION

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4. Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities, if known.
NA - NONPROJECT ACTION

5. Does the proposal lie within a 100 year floodplain? If so, note location on the site plan.
NO - NPROJECT ACTION to adress all floodplains in Shoreline on the Flood Insurance Rate Maps (FIRM). By definintion the proposed FMO will apply to all 100-year floodplains mapped in Shoreline.

6. Does the proposal involve any discharges of waste materials to surface waters? If so describe the type of waste and anticipated volume of discharge.
NA - NONPROJECT ACTION

- b. Ground:**
 1. Will ground water be withdrawn or will water be discharged to ground water? Give general description, purpose and approximate quantities if known.
NA - NONPROJECT ACTION

 2. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals ...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.
NA - NONPROJECT ACTION

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AGENCY USE ONLY**c. Water Runoff (including storm water):**

1. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

NA - NONPROJECT ACTION intended to minimize impacts of development on frequently flooded areas.

2. Could waste materials enter ground or surface waters? If so, generally describe.

NA - NONPROJECT ACTION

3. Proposed measures to reduce or control surface ground and runoff water impacts, if any:

NA - NONPROJECT ACTION intended to minimize impacts of development on frequently flooded areas.

4. Plants:

- a. Check or circle types of vegetation found on the site:

- ☒ deciduous tree: alder, maple, aspen, other
- ☒ evergreen tree: fir, cedar, pine, other
- ☒ shrubs
- ☒ grass
- ☐ pasture
- ☐ crop or grain
- ☒ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- ☒ water plants: water lily, eelgrass, milfoil, other
- ☒ other types of vegetation

- b. What kind and amount of vegetation will be removed or altered?

NA - NONPROJECT ACTION

- c. List threatened or endangered species known to be on or near the site.

No documented threatened or endangered plant species known to be within the City's mapped regulatory floodplain.

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- d. Proposed landscaping use of native plants or other measures to preserve or enhance vegetation on the site if any:

NA - NONPROJECT ACTION

5. Animals:

- a. Mark all boxes of any birds and animals which have been observed on or near the site or are known to be on or near the site:

Birds: ☒hawk, ☒heron, ☒eagle, ☒songbirds, other: purple martin and pileated woodpecker

Mammals: ☐deer, ☐bear, ☐elk, ☒beaver, other: racoon

Fish: ☐bass, ☒salmon, ☒trout, ☐herring, ☒shellfish, other: crab

- b. List any threatened or endangered species known to be on or near the site.

Purple martin, Progne subis, is a Washington State Candidate Species with a mapped breeding location in the City's regulatory floodplain area. Additionally pileated woodpecker, Dryocopus pileatus, is a Washington State Candidate Species that has been observed in the Boeing Creek Basin.

Federal threatened species - Puget Sound chinook salmon, Oncorhynchus tshawytscha, are documented as using Boeing Creek.

Federal species of concern - coho salmon and bald eagle have been documented in the Boeing Creek Basin.

- c. Is the site part of a migration route? If so explain.

Historically, salmonids used the streams for rearing, spawning, and migration purposes. This use is currently observed in McAleer Creek and the lower section of Boeing Creek. Ballinger Creek supports cutthroat trout but little is known of their current use. Thornton Creek has been known to support this salmonid use within recent times downstream and outside of the City limits. For a more details see City of Shoreline 2012 Shoreline Master Program, 2011 Surface Water Master Plan, the 2009 Thornton Creek Watershed Plan, and the 2004 Boeing Creek Basin Characterization Report.

- d. Proposed measures to preserve or enhance wildlife if any:
NA - NONPROJECT ACTION intended to provide city-wide regulations for the protection of riparian zone habitat areas.

6. Energy and Natural Resources:

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc
NA - NONPROJECT ACTION

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
NA - NONPROJECT ACTION

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- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts if any:

NA - NONPROJECT ACTION

7. Environmental Health:

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur a result of this proposal? If so describe.

NA - NONPROJECT ACTION

1. Describe special emergency services that might be required.

NA - NONPROJECT ACTION

2. Proposed measures to reduce or control environmental health hazards, if any:

NA - NONPROJECT ACTION

b. Noise:

1. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

NA - NONPROJECT ACTION

2. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

NA - NONPROJECT ACTION

3. Proposed measures to reduce or control noise impacts, if any:

NA - NONPROJECT ACTION

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8. Land and Shoreline Use:

- a. What is the current use of the site and adjacent properties?
City-wide. The currently mapped regulatory floodplain areas are predominately residential uses with a few public facilities, city parks and private open spaces. The Point Wells Annexation area is currently an industrial use and is designated for mixed use if incorporated into the City.
- b. Has the site been used for agriculture? If so, describe
NA - NONPROJECT ACTION
- c. Describe any structures on the site.
NA - NONPROJECT ACTION
- d. Will any structures be demolished? If so, what?
NA - NONPROJECT ACTION
- e. What is the current zoning classification of the site?
City-wide. Mapped floodplains include the following zones: R4, R6, R12, R18, and R24.
- f. What is the current comprehensive plan designation of the site?
City-wide. Mapped floodplains include the following comprehensive plan landuse designations: Low Density Residential, Medium Density Residential, High Density Residential, Public Facilities, Public Open Space and Private Open Space. The Point Wells Annexation area is identified as Mixed use.
- g. If applicable, what is the current shoreline master program designation of the site?
NA - NONPROJECT ACTION. All shoreline master program designations would apply to the Puget Sound flood hazard area as these regulations apply to the full extent of the Puget Sound shoreline within the City limits.
- h. Has any part of the site been classified as an “environmentally sensitive” area? If so, please specify.
Chapter 20.80 SMC Critical areas designates geologic hazards, fish and wildlife habitat conservation areas, wetland, stream and aquifer recharge areas as well as designating the regulatory floodplain as flood hazard critical areas. All of these types of critical areas, except aquifer recharge areas, are known to exist within the mapped regulatory floodplain.

- i. Approximately how many people would reside or work in the completed project?
NA - NONPROJECT ACTION
- j. Approximately how many people would the completed project displace?
NA - NONPROJECT ACTION

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- k. Proposed measures to avoid or reduce displacement impacts, if any:
NA - NONPROJECT ACTION
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
NA - NONPROJECT ACTION
- 9. **Housing:**
 - a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low income housing.
NA - NONPROJECT ACTION
 - b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low income housing.
NA - NONPROJECT ACTION
 - c. Proposed measures to reduce or control housing impacts if any:
NA - NONPROJECT ACTION
- 10. **Aesthetics:**
 - a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?
NA - NONPROJECT ACTION
 - b. What views in the immediate vicinity would be altered or obstructed?
NA - NONPROJECT ACTION

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- c. Proposed measures to reduce or control aesthetic impacts, if any:
NA - NONPROJECT ACTION

11. Light and Glare:

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

NA - NONPROJECT ACTION

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

NA - NONPROJECT ACTION

- c. What existing off site sources of light or glare may affect your proposal?

NA - NONPROJECT ACTION

- d. Proposed measures to reduce or control light and glare impacts if any:

NA - NONPROJECT ACTION

12. Recreation:

- a. What designated and informal recreational opportunities are in the immediate vicinity?

NA - NONPROJECT ACTION

- b. Would the proposed project displace any existing recreational uses? If so, please describe.

NA - NONPROJECT ACTION

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- c. Proposed measures to reduce or control impacts on recreation including recreation opportunities to be provided by the project or applicant if any:

NA - NONPROJECT ACTION

13. Historic and Cultural Preservation:

- a. Are there any places or objects listed on or proposed for national, state or local preservation registers known to be on or next to the site?

If so, generally describe.

NA - NONPROJECT ACTION. None of the historic structures included in the City's historic inventory or registered as national, state, or local landmark historic structures are located within the regulatory floodplain areas.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific or cultural importance known to be on or next to the site.

NA - NONPROJECT ACTION. None known in the regulatory floodplain areas.

- c. Proposed measures to reduce or control impacts, if any:

NA - NONPROJECT ACTION

14. Transportation:

- a. Identify public streets and highways serving the site and describe proposed access to the existing street system. Show on site plans, if any:

NA - NONPROJECT ACTION

- b. Is site currently served by public transit? If not what is the approximate distance to the nearest transit stop?

NA - NONPROJECT ACTION

- c. How many parking spaces would the completed project have? How many would the project eliminate?

NA - NONPROJECT ACTION

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- d. Will the proposal require any new roads, streets or improvements to existing roads or streets not including driveways? If so, generally describe (indicate whether public or private).

NA - NONPROJECT ACTION

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

NA - NONPROJECT ACTION

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

NA - NONPROJECT ACTION

- g. Proposed measures to reduce or control transportation impacts if any:

NA - NONPROJECT ACTION

15. Public Services:

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

NA - NONPROJECT ACTION

- b. Proposed measures to reduce or control direct impacts on public services, if any.

NA - NONPROJECT ACTION

16. Utilities:

- a. Mark all boxes of utilities currently available at the site:

☒electricity, ☒natural gas, ☒water, ☒refuse service,
☒telephone, ☒sanitary sewer, ☒septic system, other:cable/internet

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- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity that might be needed.

NA - NONPROJECT ACTION

c. **SIGNATURE**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Printed Name: Juniper Nammi, AICP

Address 17500 Midvale Ave N, Shoreline, WA 98133

Telephone Number: (206)801-2525 Date Submitted April 13, 2012

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AGENCY USE ONLY**D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS
(DO NOT USE THIS SHEET FOR PROJECT ACTIONS)**

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent of the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water/emissions to air/production, storage, or release of toxic or hazardous substances; or production of noise?
The proposal would not directly increase discharges to water; emissins to air, production, storage, or release of toxic or hazardous substances, or production of noise. The proposed regulations require no net increase of stormwater runoff from sites adding 10 percent or more impervious surface. Additionally they prohibit materials in new development that would be hazardous, toxic or a threat to water quality. Noise production is not regulated by the proposed FMO.

Proposed measures to avoid or reduce such increases are:
NA

2. How would the proposal be likely to affect plants, animals, fish, or marine life?
The proposed regulations will likely have a net positive impact on plants, animals, fish and marine life due to the new proposed standards for habitat protection with requirements for mitigation if adverse impacts to habitat are expected.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:
The ordinance as written provides the protections anticipated by FEMA to comply with the ESA.

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3. How would the proposal be likely to deplete energy or natural resources?

NA

Proposed measures to protect or conserve energy and natural resources are:

NA

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

The FMO intends to protect the regulatory floodplain areas which are the designated flood hazard critical areas in the city. The proposed regulations are more protective of the flood hazard areas than the previous critical area and flood damage prevention regulations that will be replaced. Where the proposed regulations are less strict than other regulations such as critical areas regulations the more restrictive applicable regulations would prevail.

Proposed measures to protect such resources or to avoid or reduce impacts are:

The ordinance as written provides the protections anticipated by FEMA to comply with the ESA.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

The proposed ordinance is consistent with the City of Shoreline Shoreline Master Program and Comprehensive Plan.

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Proposed measures to avoid or reduce shoreline and land use impacts are:

The proposed FMO includes provisions to minimize and mitigate the potential impacts of shoreland and land use impacts to riparian habitat and habitat functions. The ordinance also includes provisions to minimize and mitigate potential impacts of new development and substantial improvements to avoid and prevent flood damage, flood capacity and water quality.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

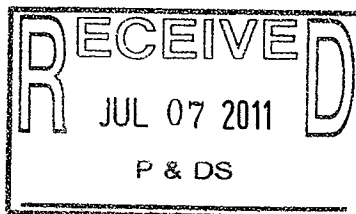
NA

Proposed measures to reduce or respond to such demands(s) are:

NA

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

The ordinance as written provides the protections anticipated by FEMA to comply with the ESA. Where the FMO overlaps with the Shoreline Management Program and the City's Critical Area regulations the most restrictive standards would apply.



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 www.GordonDerr.com

July 5, 2011

Joe Tovar
 Director, Planning Dept.
 City of Shoreline
 17500 Midvale Ave N
 Shoreline, WA 98133-4905

Re: Property Owners for Sensible Floodplain Regulation
 Status of Implementation of the NFIP Biological Opinion

Dear Mr. Tovar:

I am writing to you today for three reasons. First, I would like to introduce the City of Shoreline to Property Owners for Sensible Floodplain Regulation ("POSFR"). POSFR is a new Washington non-profit corporation formed by property owners and industry groups concerned about the potential unnecessary over-regulation of floodplain areas in the Puget Sound region. Second, I would like to provide a brief preview of POSFR's legal position regarding the City of Shoreline's obligations relative to the Biological Opinion issued by NOAA-National Marine Fisheries Service ("NOAA-Fisheries") in September 2008 to the Federal Emergency Management Agency ("FEMA") regarding the National Flood Insurance Program ("NFIP"). As explained more fully below, POSFR believes that FEMA and NOAA-Fisheries are reaching beyond their legal authority in suggesting to local jurisdictions that they have an obligation to implement the recommendations set forth in the NFIP Biological Opinion. Third, I am requesting that you add POSFR as an "interested party" or "party of record" regarding any efforts by the City of Shoreline related to the NFIP Biological Opinion.

I. Who is POSFR?

For the last several years, numerous industry groups, including the Association of Washington Business, the Washington REALTORS, the Building Owners and Managers Association of Seattle-King County, and the Master Builders Association of King and Snohomish Counties (to name a few), have been tracking two related activities affecting floodplains in the Puget Sound region. First, we have been tracking FEMA's efforts to update the Flood Insurance Rate Maps ("FIRMs") for many of the jurisdictions in the Puget Sound region, including King, Snohomish, Pierce and Skagit counties and the cities within those counties. Initially we had significant concerns regarding the preliminary FIRMs that FEMA produced for much of the Puget Sound region. At this time, however, it seems that our concerns have been allayed – or at least deferred – by FEMA's recent decision to re-evaluate its "without levees" policy. Until FEMA issues a decision regarding how it will account for non-accredited

levees in its upcoming FIRMs, it is our understanding that FEMA's mapping efforts are "on hold" in much of the region.

Second, we have been tracking FEMA's efforts to implement the NFIP Biological Opinion issued by NOAA-Fisheries related to the operation of the NFIP in the Puget Sound region. As you know doubt know, FEMA has been pressing local governments to modify their development regulations to implement Element 3 of the "Reasonable and Prudent Alternative" set forth in the Biological Opinion ("RPA Element 3").

POSFR came together earlier this year to provide a vehicle for the various industry groups, as well as myriad property owners who may be affected by the remapping, BiOp implementation, or both, to more intentionally track and weigh in on these activities. To be clear, POSFR understands and supports sensible floodplain regulation. We do not, however, believe that RPA Element 3 represents sensible floodplain regulation. RPA Element 3 proposes to severely restrict nearly all development in floodplains irrespective of existing conditions or actual habitat impacts – and goes beyond what FEMA or NOAA-Fisheries can legally require of local jurisdictions under the NFIP as currently enacted. Consequently, POSFR is reaching out to local jurisdictions to encourage you to evaluate carefully both the legal and technical bases underpinning RPA Element 3 and FEMA's efforts to implement it.

II. Local Government Duty Relative to the Biological Opinion

Right now POSFR's key concern is how local jurisdictions respond to the Biological Opinion. We want to be sure that local governments do not misunderstand their legal obligations and overreact to perceived pressure.

As you know, FEMA has offered local jurisdictions participating in the NFIP three options to implement RPA Element 3:

- (1) Adopt a Model Ordinance prepared by FEMA.
- (2) Demonstrate how their existing regulations satisfy RPA Element 3. To the extent FEMA determines there are gaps between a local jurisdiction's existing regulations and the requirements of RPA Element 3, FEMA is proposing that local jurisdictions modify their flood hazard regulation to fill those gaps.
- (3) Demonstrate ESA compliance within the floodplain on a permit-by-permit basis. FEMA has articulated that this may occur in one of two ways: (a) direct consultation pursuant to ESA Section 7(a)(2) for projects with a federal nexus (i.e., projects authorized, funded or carried out by a federal agency); or (b) review by the local jurisdiction (without NOAA-Fisheries involvement).¹

¹Because flood hazard permits are issued by the local jurisdiction, not any federal agency, they do not trigger a federal nexus. A project may, however, include a separate federal component (e.g., a Section 404 Clean Water Act permit), which would trigger a federal nexus and ESA consultation regarding that federal permit.

Since FEMA began offering local jurisdictions these three options, POSFR has been actively monitoring local jurisdictions' decisions regarding which option to pursue and their progress toward implementation. As part of this monitoring, we have seen significant confusion and ambiguity regarding FEMA's and NOAA-Fisheries' interpretation and explanation of what exactly RPA Element 3 requires. Recent meetings and conferences sponsored by FEMA and NMFS (the March 1 & 2 "Demystifying the NFIP Alignment with ESA" in Edmonds, and the several "Biological Assessment Workshops" held throughout the region in April and May) had left POSFR feeling optimistic that FEMA and NMFS were moving away from "one size fits all" prescriptive standards toward environment-specific, function-based performance standards (i.e., conserve floodplain functions as they currently exist where they currently exist) that acknowledge local circumstances and past development.

FEMA and NMFS, however, have been reluctant to memorialize this interpretation of RPA Element 3 in a meaningful way on which local jurisdictions and property owners may rely. Further, we understand that FEMA has been unwilling, in reviewing several local jurisdictions' option 2 checklists, to accept local jurisdictions' scientific rationale for something different than the "one size fits all" buffers set forth in RPA Element 3. Consequently, we are increasingly skeptical of whether FEMA and NMFS actually intend to offer the flexibility and environment-specific, function-based approach outlined during the meetings earlier this spring.²

Until FEMA and NMFS are willing to take a more sensible (and legally defensible) approach to RPA Element 3, local jurisdictions should reflect on the scope of FEMA's legal authority to attempt to demand compliance with RPA Element 3. Review of FEMA's existing NFIP regulations demonstrates that FEMA does not have the authority to require local governments to implement RPA Element 3. Instead, pursuant to FEMA's existing regulations, FEMA may only require that local governments require project applicants to obtain all other "necessary permits" from applicable federal and state agencies. In the context of the ESA, the only "permit" that could be required is an Incidental Take Permit – which is only "necessary" if required under Section 10 of the ESA.³ See 44 C.F.R. §60.3(a)(2). Pursuant to Section 10, an Incidental Take Permit *is only required for projects that "take" endangered species*. This is a very different standard than the "no adverse effects" standard set forth in RPA Element 3.

It is also notable that this is not a new requirement. Since the various ESA fish listings in the Puget Sound region (beginning in the late 1990s), local jurisdictions have borne the obligation to ensure that permits they issue for development proposals throughout their jurisdictions – not just in floodplains – do not trigger "take." 16 U.S.C. §1538. To date, we are not aware of any

² We understand that the Washington State Department of Commerce and the National Fish and Wildlife Foundation recently initiated a "Technical Assistance Project" aimed at helping local jurisdictions work through option 2 using an environment-specific, functions-based approach. We will continue to monitor this effort and suggest that local jurisdictions do the same before proceeding with option 2.

³For projects with a federal nexus (i.e., that are authorized, funded or carried out by a federal agency), the project applicant has an independent obligation to consult regarding impacts to endangered species and critical habitat pursuant to Section 7(a)(2) of the ESA. This obligation rests with the applicant, not the local jurisdiction.

jurisdiction in the Puget Sound region that has been challenged for failing to meet this requirement.

We understand that the ESA is complicated with numerous technical terms and requirements. We would suggest that if you have questions about this, you review FEMA's regulations (44 C.F.R. §60.3(a)(2)) and the ESA (16 U.S.C. §1531, *et seq.*) with your City Attorney. The bottom line is that FEMA has not taken the necessary steps to require any jurisdiction to implement RPA Element 3, but only to require an Incidental Take Permit where necessary because a project causes "take." Consequently, POSFR asks that local jurisdictions not overreact to the Biological Opinion by unnecessarily restricting either existing or future development in the floodplain.

III. Notice of Activities related to the NFIP Biological Opinion

Finally, please add me on behalf of POSFR to the list of interested parties or parties of record on any effort that your jurisdiction may undertake related to RPA Element 3 or other provisions of the NFIP Biological Opinion. To date, FEMA has not engaged in a public process in which all interested persons may participate. One of POSFR's goals is to ensure public participation in this process and ultimately the adoption of sensible floodplain development standards. Notice is a critical step.

Thank you in advance for your consideration. We anticipate that this will be the first of several communications between the City of Shoreline and POSFR. We would also welcome the opportunity to meet with appropriate members of your staff to discuss these issues if that would be useful at this point. Otherwise, we look forward to hearing from you regarding any efforts related to the NFIP Biological Opinion or other efforts affecting floodplain development.

Very truly yours,



Molly A. Lawrence

cc: POSFR Board of Directors

Paramount Park Neighborhood Group

c/o Janet Way
940 NE 147th St
Shoreline, WA 98155

City of Shoreline Planning and Development
c/o Juniper Nammi
17500 Midvale Ave N
Shoreline, WA 98133

Dear Ms Nammi:

I represent the Paramount Park Neighborhood Group, and we wish to comment on the SEPA process for the Draft Amendments to the Development Code for the FEMA Flood Plain Management ordinance. We request to be made “Parties of Record” with legal standing on this matter.

Our neighborhood is particularly interested in protecting property and ecological integrity for the Littles Creek sub-basin, near Paramount Park Open Space.

Littles Creek Sub-basin

There is a history of flooding incidents in this sub-basin, particularly in the Twelfth NE and lower Tenth Ave NE areas. Residential properties have been flooded and damaged and egress on area streets is often blocked by localized flooding. Littles Creek is a year round stream that flows into Thornton Creek downstream at Jackson Park in Seattle. Despite it’s various flooding history and some other problems it still has the best stream reach in the City as identified in the City’s own documents. It is still potentially excellent salmonid habitat.

Paramount Park also contains over 6 acres of wetlands that serve as excellent retention for both storm water and providing clean water for Littles Creek.

We are concerned that Littles Creek sub-basin was not included in this FEMA Floodplain Management Ordinance, since properties within it have been subject to numerous flooding incidents. Also, given the ecological value of the Paramount Park Natural Area, associated wetlands and ecosystem, and the value to neighbors for its recreational benefits, Littles Creek should be considered in this assessment. It is a Fish and Wildlife

Habitat Conservation Area by definition and should benefit from the protections being given to Floodplain Management Zones in the proposed Ordinance.

This area may be affected greatly by upcoming changes and planning pertaining to Light Rail stations and associated zoning changes. Changes and increases in “impervious surfaces” could be likely with Light Rail Station and Upzoning. Therefore this basin also must be considered seriously in any floodplain management ordinances.

Littles Creek has a history of flooding and erosion, particularly at the trail crossing at NE 148th St. This is a popular pedestrian and bike route that should be carefully considered in future plans for Transit Oriented Development nearby. Often during big storms this trail becomes inundated and Littles Creek overflows the culvert. The trail then becomes unsafe again because of the erosion.

Geological Issues

The SEPA Checklist on this FEMA Floodplain Management issue makes an incorrect statement:

“The geology in the Thornton Creek basin do not include any significant steep ravines or bluffs, nor are the soils identified as slide prone.”

The statement is not accurate, because the Littles Creek sub-basin certainly DOES contain some very steep slopes (even 90%) and DOES contain some slide prone areas. This is true particularly near Paramount Park and “Tenth Ave NE.”

According to the City’s own Thornton Creek Watershed Characterization Report, there is are some unusual soil structures there and even, according to the FEMA Emergency Management planning a “liquefaction zone” which crosses under NE 145th St (Hwy 523.)

Priority Species in Thornton Creek Watershed

Many “Species of Concern” depend on habitat in the Thornton Creek Watershed and the Littles Creek sub-basin.

There are many documented sightings of species of fish, birds and mammals in the Thornton Creek Watershed.

Salmon and Steelhead have been documented in the Shoreline sections of Thornton Creek, even with degradations that have taken place. Thornton Creek is well known to be habitat for five species of salmonids, including, Chinook, coho, sockeye, steelhead and cutthroat.

Also, there have been many sightings of Pileated Woodpecker (nesting pair), Great Blue Heron, and Raptors including Bald Eagle, Sharp-shinned, Redtail and other hawk species in the Thornton Creek Watershed.

In addition, River Otter, Beaver, Douglass Squirrel and other mammals have been sighted.

There are important factors that should still be studied about the Littles Creek Sub-basin. We urge the Planning Commission to seriously consider them and make amendments accordingly.

Thank you for your consideration of our comments.

Respectfully Submitted,

Janet Way, President
Paramount Park Neighborhood Group

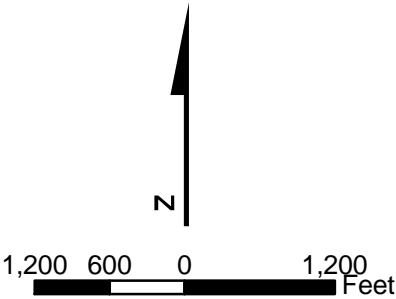






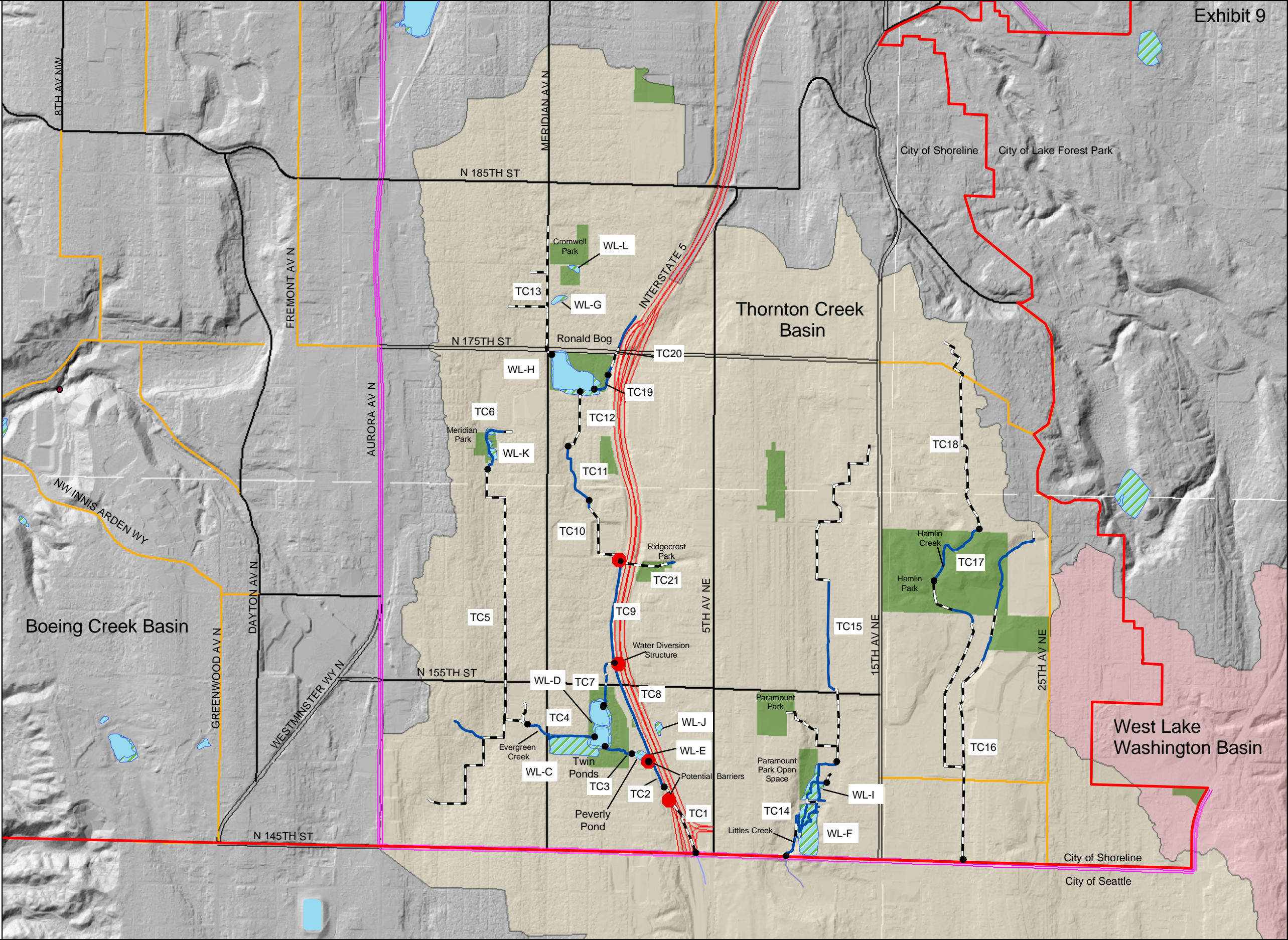
Legend

- Open Water Course
- Piped Water Course
- Wetlands
- WL-C Wetland ID
- Parks
- TC1 Reach ID
- Reach Starting Point
- Fish Passage Barrier
- Thornton Creek Basin
- W. Lake Washington Basin
- Waterbodies
- Shoreline City Limits
- Interstate
- State Route
- Principal Arterial
- Minor Arterial
- Collector Arterial



No warranties of any sort accompany this product or are implied including accuracy, fitness, or merchantability.

For regulatory purposes, segments within a reach are classified on a site-specific basis. The mapping in this document provides a general guide to classification.



Tetra Tech / KCM
1917 1st Avenue
Seattle WA 98101



Thornton Creek Basin Characterization Report

Figure 2-3
Stream Reaches, Wetlands
and Fish Passage Barriers



Memorandum

DATE: May 17, 2012
TO: Mayor Keith McGlashan and the City Council
FROM: Chair Donna Moss and the Planning Commission
RE: Development Code Amendments for Floodplain Management Ordinance

The Planning Commission held a study session and a public hearing on the amendments to the Development Code regarding floodplain management. The Commission voted to recommend the attached development regulations.

Planning Commission believes the proposed development regulations meet the applicable criteria set forth in the City's Code.

A. Public Outreach Chronology

- The Commission publicized their meetings on the City website and in Currents and sent notice to a group email list developed from community meetings and public comments over the past 2 years.
- Public notice for SEPA review and non-significance determination as well as the public hearing was publicized initially April 18, 2012.
- A public hearing was held on May 3, 2012.

B. Development Code Amendment Criteria – 20.30.350

SMC 20.30.350 establishes the following criteria for approval of a Development Code amendment:

1. The amendment is in accordance with the Comprehensive Plan;

The proposed development code amendments, in conjunction with the proposed Floodplain Management Ordinance, are supported by several of the City's Comprehensive Plan goals and policies.

LU1: *Preserve environmental quality by taking into account the land's suitability for development and directing intense development away from natural hazards and important natural resources.*

The proposed amendments facilitate directing new development away from the regulatory floodplain where feasible.

LU89: *The following shall be designated environmentally critical areas and regulated through the Shoreline Municipal Code: frequently flooded areas, geologically hazardous areas, wetlands, streams, and fish and wildlife habitat conservation areas.*

The proposed amendments update critical area regulations for frequently flooded areas, known as flood hazard areas in Shoreline's code.

LU101: *Research information available on tsunami hazards and map the tsunami hazard areas located in Shoreline. Consider the creation of development standards and emergency response plans for tsunami hazard areas to avoid tsunami-related impacts.*

The proposed amendments remove reference from City code to State and Federal regulations, but do not contradict the direction of policy LU101.

LU104: *Protect floodplains by limiting new development. All new permanent structures and roadways should be located above the 100-year flood level, wherever feasible. New development should be required to replace existing flood storage capacity lost due to filling. The City should not increase the allowed housing density of residential areas within the 100-year floodplain.*

The proposed amendments facilitate updating the City's floodplain regulations to better meet the direction of policy LU104.

LU107: *Develop educational materials, incentives, policies, and regulations to conserve native vegetation on public and private land for wildlife habitat and human enjoyment. The city shall establish regulations to protect mature trees and other native vegetation from the negative impacts of residential and commercial development, including short-plat development.*

The proposed amendments facilitate adding new habitat protection standards to the City's floodplain management regulations.

CF38: *The City shall update, as needed, its storm water and flood hazard regulations and programs.*

The proposed amendments are required, in conjunction with the proposed Floodplain Management regulations, based on direction from FEMA for update of the City's flood hazard regulations, which has not been done since original adoption in 1997.

2. *The amendment will not adversely affect the public health, safety or general welfare;*

The amendment does not adversely affect the public health, safety or general welfare because it facilitates updating floodplain regulations to incorporate best available science and practices for better protection of life and property as well as natural habitat.

3. *The amendment is not contrary to the best interest of the citizens and property owners of the City of Shoreline.*

These development code amendments, together with the proposed Floodplain Management regulations, will enable the City to continue to meet the requirements of the National Flood Insurance Program and maintain the City as an eligible community for Federal flood insurance benefits. This is in the best interest of property owners throughout the City, as well as owners of properties located within the regulatory floodplain.

The proposed amendments are also intended to remove redundant and outdated regulations so that floodplain management regulations can be consolidated in one section of the Shoreline Municipal code for clarity of the regulations for customers making application for development.

The Shoreline Planning Commission reviewed the proposal in light of the criteria and concluded that the proposal met the criteria for amendment of the Development Code.

During the course of the public hearing on these development code amendments, the Planning Commission received public comment and concern about flooding on other creeks that are not currently mapped as FEMA regulatory floodplains and have not been explicitly studied with regard to flooding. Additional concerns were voiced about the new map proposed by King County for the Puget Sound shoreline. We would like you to be aware that these are concerns the Commission contemplated as part of our discussion, but it is outside of our purview and the scope of the proposed amendments under consideration.

On behalf of my colleagues on the Planning Commission, thank you for considering the Development Code amendment recommendations related to the Floodplain Management Ordinance you will be considering in June.

Date: 5/17/12

By: Donna M. Mor
Planning Commission Chair