

From: [Rachael Markle](#)
To: [Debbie Tarry](#)
Subject: RE: Liquefaction
Date: Friday, November 14, 2014 2:33:06 PM
Attachments: [145th Street Station Critical Areas map.bmp](#)

Response to Councilmember Roberts/Salomon:

The following is a link to the City's Liquefaction Map that is part of the Hazard Mitigation Plan

<http://shorelinewa.gov/home/showdocument?id=17730>

The map indicates areas of moderate to high risk of liquefaction around the within and near portions of the Paramount Open Space. The Code classifies liquefaction as a seismic hazard. I mistakenly quoted the regulations for very high landslide hazard areas, which prohibit development unless a Critical Area Reasonable Use permit can be obtained. The liquefaction areas mapped around Paramount Open Space may or may not also meet the definition of the a very high landslide hazard area. These areas are also overlain with wetlands and erosion prone soils, which are regulated and place certain restriction of development upon confirmation.

Below are the relevant Code citations:

20.80.220 Classification.

...

B. Seismic Hazard Areas. Seismic hazard areas are lands that, due to a combination of soil and ground water conditions, are subject to severe risk of ground shaking, subsidence or liquefaction of soils during earthquakes. These areas are typically underlain by soft or loose saturated soils (such as alluvium) and have a shallow ground water table.

20.80.240 Alteration.

A. The City shall approve, condition or deny proposals in a geologic hazard area as appropriate based upon the effective mitigation of risks posed to property, health and safety. The objective of mitigation measures shall be to render a site containing a geologic hazard as safe as one not containing such hazard. Conditions may include limitations of proposed uses, modification of density, alteration of site layout and other appropriate changes to the proposal. Where potential impacts cannot be effectively mitigated to eliminate a significant risk to public health, safety and property, or important natural resources, the proposal shall be denied.

B. Very High Landslide Hazard Areas. Development shall be prohibited in very high landslide hazards areas or their buffers except as granted by a critical areas special use permit or a critical areas reasonable use permit.

NOTE: If the area is defined through geotechnical analysis performed in conjunction with a development application to be a Very High Landslide Hazard Area, then development is prohibited subject to Critical Area Reasonable Use Permit.

...

D. Seismic Hazard Areas.

1. For one-story and two-story residential structures, a qualified professional shall conduct an evaluation of site response and liquefaction potential based on the performance of similar structures with similar foundation conditions; or

2. For all other proposals, the applicant shall conduct an evaluation of site response and liquefaction potential including sufficient subsurface exploration to determine the site coefficient for use in the static lateral force procedure described in the International Building Code.

Furthermore, this area is regulated by SMC 20.80 Subchapter 4 Wetlands. The delineation of the wetland and associated buffer will also dictate where development can occur around the Paramount Open Space. Paramount Open Space is assumed to be a Type II Wetland which require 75-115 foot buffers. The attached map shows the presumed extent of the wetland, stream, erosion prone area and steep slopes. Development in these designated

areas will be difficult and potential will be reduced in order to comply with the existing regulations for critical areas.

-----Original Message-----

From: Jesse Salomon

Sent: Monday, November 10, 2014 8:53 PM

To: Rachael Markle

Subject: Liquefaction

I assume you would be sending the response to CM Robert's question on liquefaction to the council. Just want to make sure that I am in the loop as I also have the question.

Jesse Salomon, Councilmember

City of Shoreline

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Sent from my iPad