

Mar 15 2021

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**To:** [billy.gross@ssf.net](mailto:billy.gross@ssf.net)  
**Cc:** [OPR State Clearinghouse](#); [OLRA@DOC](mailto:OLRA@DOC)  
**Subject:** Comments - NOP for South San Francisco General Plan update (SCH 2021020064)  
**Date:** Monday, March 15, 2021 10:03:55 AM

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**STATE CLEARINGHOUSE**

Dear Mr. Gross,

The California Geological Survey (CGS) has received the Notice of Preparation of a Program Environmental Impact Report (EIR) for the City of South San Francisco General Plan Update. This letter conveys the following suggestions and recommendations from CGS concerning geologic and soils issues related to the planning area:

1. Geologic Hazards

Several potential geologic hazards exist within the planning area. Each of the hazards listed below should be addressed in the General Plan update.

a. *Liquefaction and Landslide Hazards*

The California Geological Survey is releasing new Zones of Required Investigation (ZORIs) under the Seismic Hazard Mapping Act (SHMA) for both liquefaction and earthquake-induced landslides for the San Francisco South 7.5-minute quadrangle, in which the City of South San Francisco is located. The mapping indicates that these hazards potentially exist within the planning area as your previous general plan indicates. CGS released the preliminary map for review and comment by the impacted lead agencies on February 18, 2021.

The soon-to-be published map and report also include updated landslide mapping, a new geologic map compilation of both Quaternary and Bedrock geology, and the latest ground motion estimates. CGS used geotechnical reports collected from the cities and San Mateo County within the San Francisco South 7.5-minute quadrangle to determine geotechnical characteristics of surficial geologic units. CGS used groundwater data from the California State GAMA database and geotechnical borings to determine depth to historical high shallow ground water. This information was used to define the ZORIs. The preliminary maps are subject to a 3-month public review period and a 3-month revision period based on any comments received, after which the maps will be finalized and become official.

The SHMA of 1990 (Public Resources Code, Chapter 7.8, Section 2690-2699.6) directs the Department of Conservation, California Geological Survey to identify and map areas prone to earthquake hazards of liquefaction, earthquake-induced landslides and amplified ground shaking. The purpose of the SHMA is to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating these seismic hazards. The SHMA was passed by the legislature following the 1989 Loma Prieta earthquake.

The SHMA requires the State Geologist to establish regulatory zones (Earthquake Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development. Single family frame

dwellings up to two stories not part of a development of four or more units are exempt from the state requirements. However, local agencies can be more restrictive than state law requires. Additional information can be found at the following website:

<https://www.conservation.ca.gov/cgs/shma>.

b. *Faulting Hazards*

CGS has established Earthquake Fault Zones within and nearby the planning area. Specifically, Holocene-active strands of the San Andreas fault zone traverse the planning area. Digital versions of these maps (PDF and Shapefiles) and associated reports can be downloaded from the CGS Information Warehouse, here:

<https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/>.

c. *Ground Shaking Hazards*

The planning area is located near a number of active faults capable of producing severe ground shaking during an earthquake. The EIR should include a discussion of nearby active faults and the relative likelihood of the planning area to experience strong ground shaking. The earthquake shaking potential for various regions of California can be viewed at the following website: <https://www.conservation.ca.gov/cgs/psha>.

d. *New Tsunami Hazard Area maps, future Tsunami Regulatory Zones, and Maritime Tsunami Hazards*

CGS is planning to release new Tsunami Hazard Area maps for San Mateo County on 23 March 2021. These maps will replace the 2009 Tsunami Inundation Maps for Emergency Planning and are for evacuation planning purposes only.

In addition, in the next 4-6 months, CGS is planning to release new Tsunami Regulatory Zones under SHMA. These maps will require investigations in planned Tsunami Regulatory Engineering Subzones and evacuation planning measures in both the larger Tsunami Regulatory Zone and the Engineering Subzone. Guidance and supporting products will be provided on the SHMA website for community and project-level officials.

Harbors and marinas are the most prone to tsunami hazards because they are on the water. Oyster Point Harbor and Oyster Cove Marina are both susceptible to tsunami hazards. Harbor structures, infrastructure, and vessels are all vulnerable to damage and people in and around the harbors could be injured. The following website has been developed to provide guidance and products for maritime communities with regard to tsunami hazards: <https://sites.google.com/view/tsunami-maritime-guidance/home>.

2. Regional and Site-Specific Geology

The Program EIR should include a brief discussion of the geologic history of the area and a description of the rock types in the planning area.

3. Soils

The Program EIR should consider including a summary of the types of soils present in the planning area, as well as a discussion of the soils characteristics pertinent to development, such as source material, geographic setting, drainage characteristics, permeability, and the risk of erosion and soil expansion. The National Resources Conservation Service has an interactive soil map available at the following website:

<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

Please let me know if you have any questions or concerns with the comments in this letter.

Sincerely,

Erik Frost

**Dr. Erik Frost**

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