STATE MINING AND GEOLOGY BOARD

EXECUTIVE OFFICER'S REPORT

For Meeting Date: September 13, 2012

Agenda Item No. 7: Report on a Public Hearing that was Conducted to Receive Comments and Recommendations for the Preliminary Seismic Hazard Zone Map Specific to the Areas Encompassed in the Lick Observatory Quadrangle, Santa Clara County, Pursuant to Public Resources Code Section 2696(b) and Title 14, California Code of Regulations Section 3723(a).

INTRODUCTION: The Department of Conservation California Geological Survey has announced the release of a new Preliminary Seismic Hazard Zone Map for review and comment. The preliminary map, issued on April 26, 2012, is specific to the area encompassed in the Lick Observatory Quadrangle, Santa Clara County. The State Mining and Geology Board (SMGB) held a public hearing to receive public comment on July 13, 2012. The closing date for receipt of public comment was July 26, 2012. Comments received were transmitted to the State Geologist for consideration prior to the publication of the final Seismic Hazard Zone Map. The California Geological Survey (CGS) is prepared to make a presentation to the SMGB summarizing the salient elements of the preliminary map, and comments received.

STATUTORY AUTHORITY: The Seismic Hazards Mapping Act regulations are provided under Title 14 California Code of Regulations (CCR), Division 2, Chapter 8, Subchapter 1, Article 10, Section 3720 et seq.

Pursuant to the CCR, Article 10, Section 3722(a), "*The Mining and Geology Board shall provide an opportunity for receipt of public comments and recommendations during the 90-day period for review of preliminary seismic hazard zone maps provided by the Public Resources Code (PRC) Section 2696. At least one public hearing shall be scheduled for that purpose*."

PRC Section 3722(b) further states "*Following the end of the review period, the Board shall forward its comments and recommendations, with supporting data received, to the State Geologist for consideration prior to revision and official issuance of the maps*."

BACKGROUND: The Seismic Hazards Mapping Act requires the State Geologist to compile and issue maps identifying seismic hazard zones, also referred to as Zones of Required Investigation (ZORI), and to distribute them to all affected cities, counties and state agencies. The release of the Preliminary Map provides a 90-day public comment period for technical review and comment on the content of the Preliminary Maps and the accompanying Evaluation Reports. Once the public period has ended, the California Geological Survey then also has 90 days to revise the map, as appropriate, and issue the Official Seismic Hazard Zone Map to affected cities, counties and state agencies approximately six months after the Preliminary Release. The preliminary map for the Lick Observatory Quadrangle, Santa County, was issued on April 26, 2012. A public hearing to receive public comment was held by the SMGB's Executive Officer on July 13, 2012. The closing date for

receipt of public comment was July 26, 2012. Comments were received from the County of Santa Clara, and subsequently forwarded to the State Geologist.

State agencies proposing structures within a ZORI should require a geotechnical investigation report prior to construction. Copies of these reports should be forwarded to the State Geologist within 30 days of approval of the report. CCR Section 3724 outlines specific criteria for project approval. Additional guidance pertaining to the responsibilities of cities, counties and state agencies, and guidelines for evaluating and mitigating seismic hazards, have been developed by the SMGB as required pursuant to PRC Section 2695. These guidelines are published in California Geological Survey Special Publication 117A.

These maps are prepared using techniques recommended by the Seismic Hazard Mapping Act Advisory Committee and the SMGB. Liquefaction hazard zones are defined utilizing detailed surface and subsurface geologic information, in combination with historic high water table data, and the estimation of the maximum earthquake ground shaking likely to occur in the next 50 years. Earthquake-induced landslide hazard zones are delineated using a modified Newmark displacement analysis that incorporates terrain steepness and rock-strength data with estimates of ground shaking associated with future earthquakes.

The State Geologist notes that the extent of liquefaction and landslide hazards within a ZORI may not be uniform. The purpose of establishing these zones is to include areas within which soil conditions, topography, and the likelihood of future ground shaking indicate sufficient hazard potential to justify a geotechnical investigation. The required investigation will identify the specific characteristics of individual project sites before land-use permits are granted. This process enables local agencies to stipulate appropriate conditional requirements for the design and/or construction that can mitigate future earthquake losses. In developed regions, the Seismic Hazard Zone Maps delineating areas where geologic studies are required should not be used to infer that all existing construction within the zone boundaries is hazardous. The properties of local soil conditions and the characteristics of individual buildings are too variable for such regional conclusions to be applied appropriately.

CONSIDERATION OF THE SMGB: The report being presented by CGS is for the SMGB's information, and no recommendations are being offered. Comments received have been forwarded to the State Geologist.

Executive Officer
Respectfully submitted:

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Executive Officer