City and Borough of Sitka

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A Coast Guard City

MEMORANDUM

To: Mayor Eisenbeisz and Assembly Members

Thru: John Leach, Municipal Administrator

From: Assembly Members Knox and Mosher

Date: June 25, 2021

Subject: Ordinance repealing Sitka General Code Chapter 20.01 “Landslide Area Management”

Background

On August 18, 2015, heavy rainfall and wind resulted in more than 50 landslides in the Sitka area. The storm dumped at least 2.5 inches of rain in a six-hour period. The National Weather Service stated that the storm event was "a very exceptional and extreme weather and hydrological event." The August 2015 storm was preceded by above-normal precipitation for June and July 2015, more than double the normal amount. Subsequent to the weather and landslides event the City of Sitka commissioned three, site specific, geotechnical risk analysis studies: one at Sawmill Cove where a landslide struck the Administration building, a second at Kramer Avenue where a debris flow resulted in three fatalities and significant property damage, and a third study evaluated the landslide risk to public facilities in the Gavan Hill area. A large-scale risk mapping project was also undertaken by the State of Alaska Division of Geological and Geophysical Surveys (DGGS). Their work was funded by the Federal Emergency Management Administration (FEMA). The intent of the DGGS work was to assist the City and Borough of Sitka in becoming more resilient to landslide hazards by creating a historical debris flow inventory map, a debris flow susceptibility map, and a computer-generated debris flow runout map. The maps are not intended to predict landslides and site specific, detailed investigations should be conducted prior to development in vulnerable areas. For comparison the three "boots on the ground" geotechnical investigations commissioned by the City identified specific areas that may require special consideration for building construction, and in some cases with elevated risk, construction may not be possible.

Analysis

Large scale mapping such as that done by DGGS is based on assumptions such as soil characteristics, soil moisture, and topography that are conservative. This methodology leads to slide runout estimates that may be statistically unlikely. Such regional-scale mapping is best utilized for selecting areas for actual geotechnical site analyses. Prediction of slope movement with absolute certainty is not possible with currently available scientific knowledge or computing technology. As with any steep slope, there are always risks of instability that future owners must accept.

Present Situation

The large scale DGGS map, even in its present draft form, is known to the Sitka housing and insurance industries. We have spoken with local lenders, residential insurance agents, and an appraiser, and all persons agreed that the uncertainty surrounding this map and certain language in the Municipal Code are creating problems in the housing markets. The result is landslide insurance is being required by home financing agencies and in some cases insurance companies are unwilling to write policies because the large scale DGGS map indicates high levels of landslide potential. The situation must be resolved before the effects of this uncertainty result in a permanent dampening of Sitka's real estate market and perhaps negatively affecting property valuations.

Fiscal Note

There is no fiscal impact to repealing SGC Chapter 20.01 “Landslide Area Management”.

Recommendation

Repeal Chapter 20.01 “Landslide Area Management” of SGC defining a Restricted Landslide Area (RLA). There appears to be a rational basis for this as the existing code apparently has not proven to effectively satisfy the safety purpose while causing significant negative economic/development impacts. Repealing Chapter 20.01 “Landslide Area Management” and the RLA designation will remove the CBS as a barrier to lending and insurance. Developers, homeowners, lenders, and insurers will base their decisions on independent research and analysis from reports not commissioned or solicited by the CBS. Currently, lenders and insurers are using large scale mapping inappropriately and applying it incorrectly contrary to the disclaimer on the reports.

Encl:

(1) State DNR Division of Geological and Geophysical Surveys letter of January 10, 2020
(2) South Kramer Avenue Landslide Jacobs Circle to Emmons Street, Shannon & Wilson, Inc. February 2, 2016
(3) Gary Paxton Industrial Park Debris Flow Analysis, Shannon & Wilson, Inc. November 18, 2016
(4) Debris Flow Hazard and Risk Analysis Gavan Hill Public Facilities, Shannon & Wilson April 12, 2019
(5) Landslide Hazard Evaluation for Multi-hazard Risk Mapping in Sitka, Alaska (DRAFT) State of Alaska Department of Natural Resources, Division of Geological and Geophysical Surveys 2019