

From: Hank Landau
To: [Davis, Kris](#)
Subject: Comment for Point Wells hearing
Date: Tuesday, May 15, 2018 8:47:57 PM

Dear Hearing Examiner,

My comments concern the apparent incompleteness of the geotechnical analysis for Point Wells. I am a geotechnical engineer and the founder of Landau Associates, one of the engineering companies that has studied the geotechnical and seismic conditions in the vicinity of Point Wells. These comments reflect my own opinion and not necessarily that of the company I founded. In the interest of full disclosure I live in Woodway, above Pt. Wells.

Ever since we moved here in the 70's we have heard anecdotal reports about the slow movement of the slope above Point Wells. This is consistent with the geological conditions and the very low factors of safety reported by Hart Crowser, Blue Square's engineer. Where evidence of movement exists it is common to perform continuous or periodic measurements of slope movement (and groundwater conditions) for at least a year. Various techniques are available to measure movement including geophysical techniques and inclinometers. Has this been done? If not ,why not?

Factors of safety calculated for slopes are dependent on the numerical method used in the analysis. It would be helpful if the engineer compared the factors of safety they calculated to those derived by other methods. It would be even more helpful if the engineer explained slope stability in terms of the probability of failure, recognizing that calculating probability is a more expensive method and is not as commonly used as the factor of safety method.

Unless recent information has been submitted, I failed to find any analysis of the stability of the slope extending off shore from the Pt. Wells peninsula. This seems like a glaring deficiency for the following reasons: the slope offshore from Pt. Wells is very steep (according to bathymetric charts), there is a history of marine slope failures in Puget Sound, rising sea levels could increase the likelihood of slope failures and failures on the peninsula could progressively work their way inland unless the slopes were stabilized and the stabilization were to be maintained for the long haul.

Thank you,

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