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Santa Rosa Office

1305 North Dutton Ave
Santa Rosa, CA 95401
707-544-1072

Napa Office

1041 Jefferson St, Suite 4
Napa, CA 94559
707-252-8105

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DeNova Homes, Inc.
Attention: Kerri Watt
kwatt@denovahomes.com

Geologic Consultation
2008 Grant Street Subdivision
2008 Grant Street
Calistoga, California

Project Number: 7548.01.04.2

This letter is intended to address concerns brought to the attention of the Calistoga Planning Commission by a neighboring property owner, that the development planned at 2008 Grant Street in Calistoga, California may have a detrimental impact on wells in the vicinity of the project. We understand that the concern is that groundwater recharge will be affected by reduced infiltration into the soil at the project site.

RGH performed a geotechnical study for the project and presented the results in a report dated December 22, 2021. During our study we advanced seven borings to depths ranging from 5 feet to 20½ feet. We encountered highly plastic clay soil in all the borings. This highly plastic clay extends from the ground surface to depths ranging from 3½ to 13½ feet. This type of soil is typically utilized as impervious liner material for ponds and reservoirs, and generally exhibits a coefficient of permeability that ranges from 1×10^{-7} cm/sec to 1×10^{-9} cm/sec (very low permeability). Because this material blankets the entire site, we judge that groundwater recharge is not likely to be occurring at a significant rate at the project site.

We did encounter groundwater in our borings ranging in depth from 8 to 14½ feet. The groundwater was encountered in sand layers that are discontinuous between the borings. This is typical of braided stream deposits that were deposited along former stream channels. These sand layers are likely being recharged where they encounter the banks and stream bed of the nearby Garnett Creek and the Napa River.

In summary, we judge that the development planned at 2008 Grant Street has a low potential to affect conditions in nearby wells because the very low permeability of the site surface soil, that prevents significant groundwater recharge from the surface of the property. We judge that the groundwater is being recharged from the interaction of braided stream deposits with the banks and stream beds of the nearby Garnett Creek and the Napa River.

We trust this provides the information you require at this time. Please call if you have questions.

Very truly yours,
RGH Consultants



Ryan E. Padgett
Senior Engineering Geologist



REP:JJP:rep:lw:brw

[https://rghgeo.sharepoint.com/sites/shared/shared documents/project files/7501-7750/7548/7548.01.04.2 2008 grant street subdivision/phase .02 - consultation & plan review/7548.01.04.2 geologic consultation.docx](https://rghgeo.sharepoint.com/sites/shared/shared%20documents/project%20files/7501-7750/7548/7548.01.04.2%202008%20grant%20street%20subdivision/phase%2002%20-%20consultation%20&%20plan%20review/7548.01.04.2%20geologic%20consultation.docx)