Memo

HARMONY
DESIGN & ENGINEERING

To: Jade Krueger, Planning Administrator, Teton County Idaho

From: Ted Van Holland, P.E. & Jennifer Zung, P.E

CC: Sharon Fox, Planner I, Teton County, Idaho

Date: 8/30/2024

Re: Review of Eustachy-Wysong Ranch NP Evaluation

Harmony Design & Engineering has reviewed the Level 1 Nutrient Pathogen Evaluation for Eustachy-Wysong Ranch Subdivision, prepared 5/27/2024 by Civilize, PLCC. The subsequent review memo prepared by Harmony on 8/26/2024 was answered by additional information from the applicant's engineer on 8/27/2024.

The question of appropriate model parameter value for hydraulic conductivity is now supported by a specific estimate in the Nicklin report that is based on a well adjacent to the proposed subdivision (#28 in the original N-P Evaluation Report). Because it is the most site-specific and credible available data, we concur with the engineer's assertion that 325 feet per day is appropriate parameter value for use in this Level 1 evaluation.

The other issue of discussion concerns the modeled daily effluent flow rate, and it's implication on the appropriate number of bedrooms (a proxy for occupancy) as it relates to residential wastewater generation. Additional simulations were conducted by the engineer, with the conclusion that a limitation of 450 gal/day for each lot was appropriate. Harmony also concurs with this conclusion.

We therefore are able to provide a non-adverse recommendation of the Eustachy-Wysong Ranch subdivision Nutrient-Pathogen Evaluation, as it generally conforms with the Idaho DEQ guidelines and concludes that no significant impacts are predicted.

END OF DOCUMENT

Mitzi Van Arsdell <mvanarsdell@tetoncountyidaho.gov>

Eustachy Wysong NP Study

Ted VanHolland <ted.vanholland@harmonydesigninc.com> Fri, Aug 30, 2024 at 10:42 AM
To: Mitzi Van Arsdell <mvanarsdell@tetoncountyidaho.gov>, Jade Krueger <jkrueger@tetoncountyidaho.gov>
Cc: Jen Zung <jen.zung@harmonydesigninc.com>

Jade, Mitzi,

Given the new information and simulations that Husk has provided in response to our previous review memo, we are in agreement that it meets IDEQ guidelines for a “no significant impact” finding.

Thanks,

Ted VanHolland, PE
Environmental/ Civil Engineer

HARMONY
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Memo

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DESIGN & ENGINEERING

To: Jade Krueger, Planning Administrator, Teton County Idaho

From: Ted Van Holland, P.E. & Jennifer Zung, P.E

CC: Sharon Fox, Planner I, Teton County, Idaho

Date: 8/14/2024

Re: Review of Eustachy-Wysong Ranch NP Evaluation

Harmony Design & Engineering has reviewed the Level 1 Nutrient Pathogen Evaluation for Eustachy-Wysong Ranch Subdivision, prepared 5/27/2024 by Civilize, PLCC. The presentation of site conditions and modeling parameters was generally consistent with recognized reference guidance, as well as a work plan that was submitted and discussed on 5/1/2024. However, this review has identified that the Level 1 spreadsheet predictive model composition assigns a key parameter value (Hydraulic Conductivity) that is outside of the corresponding reference range. The effect of the selected parameter value is significant in the model results, and therefore it is significant to the validity of the conclusion of this N-P evaluation.

This N-P evaluation uses the value of 325 feet per day for model simulations while the Nicklin Earth model report indicates that 80 ft/day was assigned at this location for the final model upper-most saturated layer. The selection of the hydraulic conductivity value used in this Level 1 N-P simulation should be based on the Nicklin modeling effort, or additional legitimate data sources and recognized methods should be presented to justify a higher value in the Level 1 spreadsheet. If the hydraulic conductivity in this Level 1 simulation is adjusted to what the Nicklin model would suggest, then the conclusion of the N-P report appears invalid. If alternative modeling approaches (such as Level 2) are proposed, a new work plan should be submitted for review.

Additionally, the evaluation is for a maximum of 300 gpd of wastewater flow per lot. This is equal to a single 4-bedroom home per lot. If guest houses are not restricted for the subdivision, the analysis should increase the number of homes in the analysis accordingly.

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