

**BEFORE THE HEARING EXAMINER
FOR SKAGIT COUNTY**

In the Matter of the Application of)	No. PL16-0556
)	
Bill Wooding, on behalf of)	Lake Erie Pit Special Use Permit
Lake Erie Pit, LLC)	
)	
)	FINDINGS, CONCLUSIONS,
<u>For a Special Use Permit</u>)	AND DECISION ON SECOND REMAND

SUMMARY OF DECISION

The request for a mining special use permit to allow the expansion of an existing gravel mine located in the vicinity of Lake Erie, off Rosario Road on Fidalgo Island, from its current 17.78 acres to the proposed 53.5 acres, is hereby **DENIED**. The Applicant has failed to provide the information required in the Board of County Commissioners’ second remand order, dated October 6, 2023.

SUMMARY OF RECORD

Hearing Date:

On May 8, 2024, the Hearing Examiner held an open record hearing on remand from the Skagit County Board of County Commissioners, utilizing a hybrid approach allowing for participation in person or through remote access technology. Approximately 80 people attended the hearing either remotely or in-person. Because this is the second remand on the subject of geology, and because the accuracy of the numerous expert geologist reports in the record is the sole remaining disputed issue, the Hearing Examiner was primarily concerned with the testimony of the three expert geologists present at the hearing. The Hearing Examiner afforded the geologists several hours of speaking time to ensure he had the fullest possible understanding of the complex geological issues implicated in this case. The Hearing Examiner also afforded additional time to the representatives of the Appellant groups, Evergreen Island and Sunset Lane Homeowners Association, because their appeals were the basis for the remand. Due to the time constraints that the lengthy geological reports and the Appellant testimony imposed on the hearing, the Hearing Examiner was unable to take testimony from the majority of people present. The Hearing Examiner afforded two additional days for members of the public to submit comments in writing if they were unable to testify at the hearing due to the time constraints. Members of the public submitted comments. The Hearing Examiner afforded four additional days for the Applicant to respond in writing to the submitted comments.¹ The Applicant did not submit a response. The record closed on May 14, 2024, the deadline for the Applicant’s response.

Testimony:

¹ Two of those days were Saturday and Sunday, so the Applicant, like the public, received two working days to submit its response.

The following individuals presented testimony under oath at the open record remand hearing:

Kevin Cricchio, County Senior Planner

William Wooding, Applicant Representative

Thomas Mullen, Northwest Groundwater Consultants, Geologist for the Applicant

Alan Wald, Facet, Geologist for the County Third-Party Reviewer

Dan McShane, Stratum Group, Geologist for the Appellant Evergreen Islands

Kyle Loring, Attorney for the Appellant Evergreen Islands

Franky Parker, Board Member for the Appellant Sunset Lane Homeowners Association

David Hulton

Heidi Fish

Ryan Mullen, Aspect Consulting, Geologist for the Applicant

Exhibits:

The following exhibits were admitted into the record during the August 26, 2020, original open record public hearing² for the Hearing Examiner's original decision on this matter, which the Hearing Examiner issued on November 30, 2020:

1. Staff Report, dated August 26, 2020
2. Special Use Permit Application and Narrative, received December 2, 2016
3. Skagit County Zoning and Assessor's Map, dated July 28, 2020
4. Site Plans, dated September 28, 2016
5. Notice of Development Application, published February 2, 2017
6. SEPA Environmental Checklist, dated June 8, 2017
7. SEPA Mitigated Determination of Nonsignificance, dated December 3, 2018, and Associated SEPA Staff Report
8. Critical Areas Reconnaissance by Skagit Wetlands and Critical Areas, dated February 24, 2017
9. Hydrogeologic Site Assessment Report by Maul Foster Alongi, dated September 28, 2016
10. Observation Well Installation Letter Report by Maul Foster Alongi, dated September 28, 2017
11. Letter from McLucas and Associates, Responding to the Del Mar Comment Letter, dated December 19, 2018
12. Letter from Northwest Groundwater Consultants, Responding to the Del Mar Comment Letter, dated January 3, 2019
13. Lake Erie Pit Well Reconnaissance by Northwest Groundwater Consultants, LLC, dated March 11, 2019
14. Lake Erie Gravel Pit Traffic Impact Analysis by Gibson Traffic Consultants, Inc., dated September 2016
15. Addendum to the Lake Erie Gravel Pit Traffic Impact Analysis by Gibson Traffic Consultants, Inc., dated May 12, 2017
16. Traffic Memorandum by Skagit County Public Works, dated March 1, 2018

² The August 26, 2020, hearing continued on October 14, 2020. *Exhibit 24.*

17. Supplemental (traffic) Memorandum by Skagit County Public Works, dated May 2, 2018
18. Lake Erie Pit air quality best management practices by Maul Foster Alongi, dated September 15, 2016
19. Lake Erie Pit Expansion Noise Study by Acoustics Group, Inc., dated September 16, 2016
20. List of Neighboring Property Owners and Parties of Record Notified of the Public Hearing, undated
21. First Round of Comment Letters, various dates
22. Applicant Responses to Comment Letters, dated April 19, 2017
23. Second Round of Comment Letters, various dates

The following exhibits were admitted into the record during the June 28, 2023, open record public hearing on remand:

24. Hearing Examiner's [Original] Decision, dated November 30, 2020
25. Appellant Evergreen Islands' Appeal to the Board of County Commissioners, dated December 14, 2020
26. Resolution R20210038, Board of County Commissioners' Remand to Hearing Examiner, dated February 23, 2021
27. Hearing Examiner's Order Referring Matter to Planning and Development Services, dated March 9, 2021
28. Letters from PDS to Applicant, various dates:
 - a. Letter from PDS to Applicant Request Additional Information, dated March 23, 2021
 - b. Letter from PDS to Applicant with Deadline for Additional Information, dated May 27, 2021
 - c. Letter from PDS Denying SUP Application, dated July 21, 2021
29. Applicant's Appeal of PDS Denial of SUP, dated August 3, 2021
30. Hearing Examiner's Order Granting Appeal and Reversing Denial, dated October 18, 2021
31. Geological Hazard Site Assessment, prepared by Wood Environment & Infrastructure Solutions, Inc., dated August 11, 2022
32. Evergreen Islands Response to Geological Hazard Site Assessment, dated November 18, 2023, with attached Assessment by Stratum Group, dated November 15, 2022
33. Third-Party Review of Geological Hazard Site Assessment, prepared by The Watershed Company, dated January 18, 2023
34. Evergreen Islands Response to The Watershed Company Third-Party Review, dated March 3, 2023, with attached Response to Third-Party Review by Stratum Group, dated March 2, 2023
35. Revised Third-Party Review of Geological Hazard Site Assessment, prepared by The Watershed Company, dated January 18, 2023³
36. Notice of Public Hearing, published June 8, 2023

³ The revised exhibit was received March 31, 2023, but was still dated January 18, 2023.

37. Skagit County GIS Map of Subject Parcels and 300-Foot Buffer, undated
38. Addendum to Staff Report, dated June 28, 2023
39. Memorandum to Hearing Examiner, dated June 28, 2023
40. Third Round of Public Comments, various dates
41. Staff Hearing Presentation, presented June 28, 2023
42. Presentation of Tom Glade, presented June 28, 2023

The following exhibits were admitted into the record during the May 8, 2024, open public hearing on second remand:

43. Hearing Examiner's Decision on Remand, dated July 13, 2023
44. Notice of Decision on Remand, published July 20, 2023
45. Two Appeals of Hearing Examiner's Decision on Remand, submitted by Appellant Evergreen Island, case no. PL23-0363, and Appellant Sunset Lane Association, case no. 0380, received July 27, 2023
46. Board of County Commissioners Second Order Remanding to Hearing Examiner, resolution no. R20230197, dated October 6, 2023
47. Hearing Examiner's Second Order Referring to Planning and Development Services, dated October 6, 2023
48. Planning and Development Services Letter to Applicant, dated October 10, 2023
49. Planning and Development Services 90-day Extension Letter to Applicant, dated January 4, 2024
50. Lake Erie Pit Groundwater Evaluation, prepared by Northwest Groundwater Consultants, LLC, dated February 29, 2024
51. Lake Erie Pit Groundwater Evaluation, prepared by Facet, dated April 1, 2024
52. Notice of Public Hearing, published April 18, 2024
53. Second Addendum to Staff Report, dated May 8, 2024
54. Evergreen Islands Response to Applicant's Review on Second Remand and Third-party Review, dated April 19, 2024, including Lake Erie Groundwater Evaluation, prepared by Stratum Group, dated April 18, 2024
55. Evergreen Island Comments on First Remand, dated June 23, 2023⁴
56. County Staff Hearing PowerPoint Presentation, dated May 8, 2024
57. Combined Public Comments in Advance of May 8 Hearing, various dates
58. Combined Public Comments Following May 8 Hearing, dated May 10 and May 11, 2024

The Hearing Examiner enters the following findings and conclusions based upon the testimony at the open record second remand hearing and the admitted exhibits.

⁴ This exhibit was inadvertently omitted from the record created during the June 28, 2023 hearing. It is being added now in the interest of maintaining a complete record of the entire case.

FINDINGS

Procedural History

1. On August 26, 2020, and continued on October 14, 2020, the Hearing Examiner held an open record public hearing to consider a request by Bill Wooding, on behalf of Lake Erie Pit, LLC (Applicant), to expand an existing gravel mine located in the vicinity of Lake Erie, off Rosario Road, from its current 17.78 acres to the proposed size of 53.5 acres. Following the hearing, the Hearing Examiner issued a decision approving the expansion of the gravel mine, subject to conditions. Following the Hearing Examiner's decision, Evergreen Islands (Appellant), a nonprofit corporation based on Fidalgo Island, appealed the decision to the Skagit County (County) Board of County Commissioners (BOCC). *Exhibit 38, Addendum to Staff Report, pages 1 through 4; Exhibit 24; Exhibit 25; Exhibit 39.*
2. On February 3, 2021, the Board of County Commissioners adopted Resolution R20210038, remanding the matter to the Hearing Examiner, under the Skagit County Code (SCC), in the following terms:

Pursuant to SCC 14.60.170(10)(3),⁵ this matter is hereby REMANDED to the Skagit County Hearing Examiner for further consideration of the following matters:

- Whether the steep area to the west/northwest of the Mine requires the preparation of a Geologically Hazardous Area Site Assessment, consistent with SCC 14.24.400–.420.
- If so required, directing the Applicant to prepare a Geologically Hazardous Area Site Assessment, all consistent with SCC 14.24.400–.420 and the Hearing Examiner's discretion; and
- Any additional proceedings as may be necessary to take additional evidence related to the Geologically Hazardous Area Site Assessment, to be managed at the Hearing Examiner's discretion; and
- The imposition of such additional conditions as may be necessary to mitigate risks identified by the supplemental proceedings hereby ordered, to the extent such risks can be reasonably mitigated.

All other issues raised by the Appellant on this appeal are hereby DENIED, and the Hearing Examiner in all other respects is AFFIRMED.

⁵ As of the date of this decision, SCC 14.60.170 is no longer a valid citation. The correct citation for appeals to the Board of County Commissioners would now be SCC 14.06.170.

Exhibit 38, Addendum to Staff Report, pages 1 through 4; Exhibit 26; Exhibit 39.

3. The Hearing Examiner directed Skagit County (County) staff to require the Applicant, Lake Erie Pit, LLC, to prepare a Geologically Hazardous Area Site Assessment, whereupon County staff was to provide an amended staff report to the Hearing Examiner. Pursuant to the Hearing Examiner's direction, County staff sent several letters to the Applicant requesting the Applicant to supply the required information. County staff decided that the Applicant's response to these requests was not timely, and on July 21, 2021, staff informed the Applicant that the application was denied for lack of timely response. The Applicant appealed this denial to the Hearing Examiner, who reversed the denial in an order dated October 18, 2021. The Hearing Examiner ordered the Applicant to provide a Geologically Hazardous Area Site Assessment by the end of September 2022, which the Applicant subsequently did. Following several rounds of review by the County; its third-party consultant, The Watershed Company (reviewed by Alan Wald); and members of the public, including the Appellant, Evergreen Islands, the County set a new date for a public hearing on remand for the Hearing Examiner to consider the Geologically Hazardous Area Site Assessment and issue a decision on remand, consistent with the direction of the Board of County Commissioners in Resolution R20210038. *Exhibit 38, Addendum to Staff Report, pages 1 through 4; Exhibits 30 through 36; Exhibit 39.*

4. Following the hearing on remand, the Hearing Examiner issued a new decision on July 13, 2023. In his decision on remand, the Hearing Examiner determined that the preponderance of the evidence submitted in response to the remand order tilted in favor of the Applicant. The main disputed issue was whether groundwater flowed out of the proposed mine expansion area primarily in a northerly or northeasterly direction, away from the steep coastal bluffs identified in the February 3, 2021, remand from the BOCC, or whether groundwater flowed primarily northwesterly, in the direction of the coastal bluffs. The Hearing Examiner was persuaded by the Applicant and third-party reviewers' conclusion that the groundwater flowed primarily northerly or northeasterly. The Hearing Examiner regarded as speculative the Appellant's claims that groundwater might flow northwesterly. As the Hearing Examiner understood the Appellant's claims, a northwesterly flow was only likely if a layer of glacial till were to be removed from the proposed mine expansion area, and perhaps not even then. The Hearing Examiner construed the Appellant's arguments as a demand for stronger evidence that northwesterly flow would not occur, rather than affirmative evidence that northwesterly flow would actually occur. Accordingly, the Hearing Examiner ruled in favor of the Applicant, because the preponderance of the evidence, at that time, tilted in favor of the Applicant's claims. The Hearing Examiner noted that more groundwater modeling would have made for stronger evidence, but the Hearing Examiner did not order additional modeling because the Hearing Examiner did not believe that offsite, physical

*Findings, Conclusions, and Decision on Second Remand
Skagit County Hearing Examiner
Lake Erie Pit, LLC SUP
Special Use Permit, No. P16-0556*

investigations were warranted to rebut the Appellant's speculative arguments. *Exhibit 43*.

5. The Appellant again appealed to the BOCC. On October 6, 2023, the BOCC remanded the matter to the Hearing Examiner for a second time. In no uncertain terms, the BOCC indicated its belief that offsite, physical investigations were warranted to investigate the possibility of northwesterly groundwater flow and its potential impacts on the coastal bluffs. In relevant part, the BOCC remand order required the following:

Pursuant to SCC 14.60.170(10)(3),⁶ this matter is hereby REMANDED to the Skagit County Hearing Examiner for preparation of a [Geologically Hazardous Site Assessment] consistent with the requirements of SCC 14.24.400, -.420, including but not limited to SCC 14.24.420(e) and (f), with the Hearing Examiner considering any necessary evidence and imposing any additional conditions warranted by the foregoing analysis.

In issuing this remand order, it is the Board's intention that additional physical investigation and analysis will be performed to assess the north/northwestern groundwater flow and potential impacts under different mine development scenarios, rather than mere validation of the inferences and methodologies used in the original Maul Foster report; and

All other issue raised by the Appellant on this appeal are hereby DENIED, and the Hearing Examiner in all other respects is AFFIRMED.

Exhibit 45; Exhibit 46.

6. As in the first remand, the Hearing Examiner directed County staff to require the Applicant to prepare new geotechnical materials in response to this second remand order. As before, the Applicant submitted a report from Thomas Mullen of the Northwest Groundwater Consultants, which the County submitted for third-party review. The third-party reviewer was, again, Alan Wald, this time working for Facet instead of The Watershed Company. And, again, the Appellant submitted a report of its own geologist, Dan McShane, of the Stratum Group, who had reviewed the earlier rounds of work by the other geologists. Each of these expert geologists' latest reports and their testimonies are described below. *Exhibit 47; Exhibit 48; Exhibit 49; Exhibit 50; Exhibit 51; Exhibit 54.*
7. Consistent with the BOCC's direction, the Hearing Examiner will not revisit issues other than those related to the assessment of groundwater flow to the northwestern bluffs and the potential impacts thereof under different mine development scenarios. *Exhibit 46.*

⁶ As of the date of this decision, SCC 14.60.170 is no longer a valid citation. The correct citation for appeals to the Board of County Commissioners would now be SCC 14.06.170.

Notice of Public Hearing on Second Remand

8. A notice of public hearing was published in the *Skagit Valley Herald* newspaper on April 18, 2024. Notice was also posted onsite and mailed to neighboring landowners located within 300 feet of the subject parcels. Notice was also emailed or mailed to all parties of record. *Exhibit 52; Exhibit 53, Second Addendum to Staff Report, page 9.*

Parties' Review of Issues on Remand

9. County staff reviewed the Applicant's latest geological submissions, the comments of the County's third-party review, and the public comments in response to the latest submissions, all summarized below. Staff concluded that the latest geotechnical review was adequate to respond to the Board of County Commissioners remand, and that the proposed mine expansion should be approved, subject to the conditions in the Hearing Examiner's original decision and the decision on first remand. *Exhibit 53, Second Addendum to Staff Report, page 10; Exhibit 43.*

Applicant's Lake Erie Pit Groundwater Evaluation

10. The Applicant's Lake Erie Pit Groundwater Evaluation, dated February 29, 2024, represented the Applicant's response to the second remand order. The Applicant's geologist drilled two new test wells, denominated MW-1 and MW-2. Test well MW-1 lies within the proposed mine expansion area to the north of the existing pit. Test well MW-2 lies to the south of the southwestern corner of the proposed mine expansion area. At each test well, the Applicant's geologist evaluated the subterranean soil conditions, measured the groundwater level, and took samples of groundwater for chemical testing. *Exhibit 50.*
11. In addition to the two new test wells, the Applicant's geologist also measured the groundwater level and took water samples in five existing wells in the vicinity of the subject property, lying to the north, south, and east of the existing mine pit. The Applicant's geologist also measured the groundwater level and took water samples in two springs in the vicinity of coastal bluffs: the Dodson Spring, to the west of the proposed expansion area, and the North Spring, to the northwest of the proposed expansion area. *Exhibit 50.*
12. Based on the subterranean soil conditions and the measured groundwater levels, the Applicant's geologist prepared a series of contour lines and flow paths representing their estimation of the behavior of the groundwater in the vicinity of the mine. The contours and flow paths showed a gradual, descending gradient to the north and northwest of the proposed mine expansion area. *Exhibit 50.*
13. The steepest gradient was the one between MW-1 (within the expansion area) and the North Spring (within the coastal bluffs to the northwest). The Applicant's geologist concluded, however, that little, if any, groundwater flowed down this steepest gradient.

The Applicant's geologist believed there was a subterranean feature blocking the flow path to the northwest, which would otherwise be the strongest flow path. The Applicant's geologist noted that bedrock had been mapped in the area to the northwest of the mine site, which would serve as a block to groundwater flow in that direction. The Applicant's geologist also noted that the soil extracted from MW-1 was dry until the groundwater table was reached, which the geologist took as evidence that water would not infiltrate from the expanded mine at a rate greater than the present rate, and thus, the expanded mine would not contribute to increased groundwater flows regardless of the direction of flow. The Applicant's geologist also noted that glacial till was largely absent in the western portion of the proposed mine expansion area, and thus the removal of glacial till during mining would not be expected to change groundwater infiltration or direction—which had been one of the Appellant's challenges to previous geotechnical reviews of the proposal. *Exhibit 50.*

14. The confidence of the Applicant's geologist was bolstered by the chemical testing of groundwater samples taken at the two new test wells, the five existing wells, and the two springs. The geologist concluded that the chemical composition of the water at the two springs was not similar to the chemical composition of the water at MW-1 and MW-2, whereas the water at the wells to the north and east of the mine was similar to the chemical composition of the water at MW-1 and MW-2. The geologist took this as further evidence that water from the mine site, represented by MW-1 and MW-2, would likely flow in the direction of the wells to the north, northeast, and east of the mine, toward Lake Erie, and not in the direction of the springs to the west and northwest, the site of the coastal bluffs. *Exhibit 50.*
15. The Applicant's report did not contain any analysis of the coastal bluff erosion rate, nor any analysis of different groundwater flow paths under different mine development scenarios. *Exhibit 50.*

County's Third-party Geologist Review

16. Facet, the County's third-party reviewer, produced a review, dated April 1, 2024, of the Applicant's geological report. The reviewer was most impressed by the groundwater chemical sampling, which the review agreed constituted evidence that the groundwater from the mine site may not be hydrologically linked to the groundwater at the coastal bluffs. The reviewer also agreed there was no evidence for groundwater flow in a northwesterly direction, citing the absence of glacial till and the lack of water above the groundwater table, either of which might have been evidence that infiltrating groundwater could be directed to the northwest. The reviewer did not grapple with the Applicant's contention that a subterranean block exists that would prevent groundwater flow down the steepest gradient, which is to the northwest. *Exhibit 51.*

17. The reviewer noted that the Applicant had failed to supply any analysis of coastal bluff retreat rates. The reviewer supplied the bluff erosion rates taken from data compiled in the 1970s and 1980s by R.F. Keuler. The reviewer concluded that the estimated long-term bluff retreat rate is on the order of 2 to 4 centimeters per year for 40 years prior to 1988. The area between Biz Point and Edith Point had three to seven major slope failures in 20 years prior to 1988. Given that the reviewer agreed with the Applicant's conclusion that little or no groundwater from the mine area currently flowing in the direction of the bluffs under existing conditions, and that the expansion of the mine would not affect existing groundwater flows, the reviewer concluded that the mine expansion would have no effect on the coastal bluff erosion rate. In an abundance of caution, however, the reviewer suggested that the Hearing Examiner might impose a 100-foot buffer on the western edge of the proposed mine expansion area, a doubling of the 50 feet already required by code. The reviewer emphasized that this recommendation was for possible consideration only, because the risk of increased groundwater flow was already small even under the standard buffer. *Exhibit 51.*

Appellant's Geologist Review

18. Appellant Evergreen Island submitted a review by their own geologist, dated April 18, 2024, evaluating both the Applicant's February 29 report and the third-party reviewer's April 1 review. The Appellant's geologist noted the steep downhill gradient between the groundwater level measured at MW-1, located in the proposed mine expansion area, and the North Spring, located at the coastal bluff to the northwest. This steep gradient, according to the Appellant's geologist, meant that groundwater from the mine expansion area would primarily flow to the northwest. The Appellant's geologist disputed the Applicant's assumption that bedrock to the northwest would prevent northwesterly flow. The Appellant's geologist argued that there is no bedrock in the northwest direction:

I have walked along Rosario Road and observed the western parts of the proposed mine expansion property from the road including Parcel P19158; there are no bedrock outcrops on the western parcel of the mine property and no indications of bedrock outcrops are observed in lidar bare earth imagery. There are no bedrock exposures along Rosario Road west of the mine. I have also traversed the steep slopes above and below and to the north and southwest of North Spring; there is no bedrock at these locations.

The report geology section appears to rely entirely on an on-line map from the Washington State Department of Natural Resources Geology Portal that is reproduced in the report as Figure 4. That map shows bedrock extending to the property. Unfortunately that map is incorrect in regards to the extent of bedrock. This map error should have been recognized by NGC.⁷ Direct observations should be standard geologic practice

⁷ Northwest Groundwater Consultants, the Applicant's geologist.

particularly given the assertion that there is a bedrock ridge deflecting groundwater flow. But NGC does not document any observations of bedrock or provide any evidence of bedrock deflecting groundwater flow to support the narrative that groundwater flows in a different direction than the one shown by the data.

At the beginning of the geology section on Page 3, NGC does state that “Detailed descriptions of the surficial and subsurface geology of the Site and vicinity are presented in a map completed by the U.S. Geological Survey (Miller and Pessel, 1986).” It should be noted that Miller and Pessel (1986) do not show bedrock at the site (see portion of map below).

Contrary to NGC’s claim about the referenced map, the Miller and Pessel (1986) map does not provide detailed descriptions of the geology units. Pessel and others (1989) do provide detailed descriptions, but it appears NGC did not review the Pessel and others (1989) map. Pessel and others (1989) also do not show bedrock on the property; that map depicts the geology of the site and vicinity, as presented below.

Exhibit 54.

19. The Appellant’s geologist also disputed the results of the water chemistry analysis. The Appellant argued that the water chemistry was more similar between the test wells and the springs than between the test wells and some of the existing wells:

A review of the Piper Diagrams that NGC includes as Figure 1 reveals that the majority of the wells and the North Spring and Dodson Canyon share similar parameter concentrations, as demonstrated by the tight clustering of those water sources. The exceptions, to the extent that they exist, are the East Well and the Wooding Well, both of which plot well away from the cluster that the other water wells and springs plot at on the Piper diagrams. Using the NGC ‘distinct differences’ would suggest the Wooding Well and the East Well are in a different aquifer.

Exhibit 54.

20. The Appellant’s geologist also doubted whether whatever differences in water chemistry did exist between samples should be regarded as persuasive evidence for a hydrological separation between sample sites:

Regardless, it should be expected that some water parameters will differ between the various wells and springs because water samples come from different levels in the aquifer, from relatively narrow water bearing zones where water enters the wells through the well screens. For example, the East Well is an open-ended pipe that draws water from the opening at the end of the well pipe. That opening is within a silt zone that includes wood

fragments per the well log. Water entering the well is from an area likely below or at the base of the aquifer; hence this water should be expected to have different parameter concentrations. The parameter concentrations in other wells will be influenced by the specific narrow interval where water enters the well. The North Spring water parameters will also be influenced by nearby water flowing through organic matter and weathered soil and exposure to atmospheric air, all of which can alter the parameter concentrations in the water. These small differences in water parameters do not support the speculative comment by NGC that “a hydrologic connection between groundwater beneath the Site and the North Spring may not exist.”

Exhibit 54.

21. The Appellant’s geologist cast doubt generally on the methodology of the water level measurement techniques the Applicant’s geologist had used. The Appellant suggested that the water levels could be two to four feet higher or lower than the levels cited in the Applicant’s report. Given the relatively shallow gradient between the proposed mine expansion area and the wells to the north, northeast, and east, the range of uncertainty was great enough to cast doubt on the notion of a northerly or northeasterly flow path. *Exhibit 54.*

22. The Appellant’s geologist disputed the third-party reviewer’s findings about the northwestern bluffs. First, the Appellant’s geologist noted that he, personally, had identified three springs in the northwestern bluffs, not just the “North Spring” identified in the Applicant’s report. The most northerly of the three springs lay north of the “North Spring” site. It has been the site of a sand blowout, indicating slope instability stemming from a spring that went undetected by the Applicant and third-party reviewer. The Appellant’s geologist also noted that the third-party reviewer seemingly had not studied the coastal bluffs in person, which the Appellant’s geologist had. The Appellant’s geologist noted that the erosion rate of two to four centimeters per year was actually a doubling of the two centimeters per year reported by Keuler. Furthermore, the Keuler erosion rates did not apply north of Edith Point, where the northwestern bluffs are. In the vicinity of the bluffs, the Appellant’s geologist believed the bluff erosion rate was “very slow,” although he did not state what he believed the rate was or how he came to the conclusion that it was slower than the rates to the south described in Keuler. *Exhibit 54.*

23. Finally, the Appellant’s geologist disputed the Applicant and third-party reviewer’s findings that the mine expansion area does not contribute to groundwater recharge. The Appellant noted that heaving sands had been encountered at a shallow depth at MW-1, which the Appellant believed could be an indicator of groundwater infiltration. The Applicant’s determination that the soil was dry until the level of the groundwater table was also not based on scientific measurement of moisture in the soil but rather on mere

observation, which the Appellant's geologist believe was an unreliable method. Even if glacial till was largely absent in the western portions of the proposed expansion area, it was present in the eastern portions, and its removal could alter groundwater movement. *Exhibit 54.*

Prehearing Public Comments

24. In addition to its geologist report summarized above, the Appellant also submitted a comment from its attorney dated April 19, 2024. The Appellant argued that the conclusions of its geologist should lead the Hearing Examiner to deny the application outright, rather than attempt to impose conditions to render it safe. The Appellant argued that the Applicant's report failed to demonstrate the proposed mine expansion would be safe for the general public, as is required of mining SUPs under SCC 14.16.440(9). The Appellant argued that the Applicant's report did not include sufficient discussion of the steep slopes to the northwest, as required of geologically hazardous site assessments per SCC 14.24.080(4), which the BOCC had ordered the Applicant to prepare in its second remand. The Appellant argued that the Applicant's report did not include any discussion of the coastal bluffs, any estimation of landslide risk, or any potential flow impacts under different scenarios, all of which had been specifically requested by the BOCC in its second remand. The Appellant also cited a promise made in 2021 by the Applicant to commission a geohazard study by Canyon Environmental Group rather than Northwest Groundwater Consultants, which the Appellant argued would have led to a more credible report. *Exhibit 54.*
25. The County received additional public comments from dozens of individuals. The commenters argued that the materials submitted on second remand did not satisfy the BOCC's second remand order. Several comments noted that the Applicant had not evaluated coastal bluff retreat or landslide risk to the coastal bluffs. Although the third-party reviewer had provided some coastal bluff analysis, that analysis was not based on a site visit by the third-party reviewer. Several commenters noted the absence of direct evidence for an intervening bedrock formation to divert the northwestern downgradient flow. Commenters noted that other springs exist in the bluffs besides just North Spring and Dodson Spring. Commenters doubted the accuracy of the groundwater level measurements, given the time of year they were taken. One commenter speculated that the Applicant could be financially liable for future landslides and suggested that the Hearing Examiner should require the Applicant to purchase insurance. The majority of commenters also raised various other issues unrelated to geology, including noise, dust, traffic, pollution, aesthetics, road washouts, loss of vegetation, and impacts to wildlife habitat. *Exhibit 57.*

Testimony

26. Kevin Cricchio, County Senior Planner, testified generally about the application, the procedural history of the case, and the County's review of the materials provided on

second remand. He testified that the project site has had an active mine on the properties since the 1960s. The proposal includes the expansion of an existing gravel and sand mine operation from approximately 17.78 acres to approximately 53.5 acres. The site is accessed from Rosario road from a gated gravel driveway. The mining operation proposes to remove approximately 60,000 tons per year of gravel and sand for approximately 60 years, for a total of approximate 3,600,000 tons of material.

Mr. Cricchio acknowledged that the Applicant had not supplied the coastal bluff erosion or landslide analysis called for in the BOCC's second remand, but he argued that the missing information did appear in the County's third-party reviewer's report. He noted that the only new recommended condition of approval was a 100-foot buffer on the west side of the mine. Otherwise, the conditions previously recommended by staff and incorporated into the two previous Hearing Examiner decisions would suffice to protect the public interest and satisfy the requirements of the code and the BOCC remand order. *Testimony of Kevin Cricchio.*

27. Applicant Representative William Wooding testified that he had performed numerous excavations for housing construction in the area around Edith Point, including 500 south of Edith Point Road and 100 feet north of Edith Point Road, and had encountered a layer of bedrock three or four feet beneath the surface in many places within this area. Mr. Wooding testified that he has never observed any seepage from the walls of his existing mine, which he took as evidence that groundwater does not infiltrate the area. Stormwater in the existing pit does not infiltrate but rather pools on the ground. Mr. Wooding reiterated his geologist's findings that there is no glacial till in the western part of the proposed mine expansion area, and therefore, the mine expansion would not change the groundwater flow paths as Mr. McShane had speculated. Mr. Wooding argued that most of the opposition to the mine came from people who had moved to the area after the mine was already in operation. *Testimony of William Wooding.*
28. Thomas Mullen, Geologist for the Applicant, testified about his Northwest Groundwater Consultants report, Exhibit 50. Mr. Mullen testified that 1988 geological maps show bedrock to the northwest of the proposed expansion area and that this bedrock would prevent most, though not all, of the northwesterly flow. Mr. Mullen disputed the arguments in the Appellant's geologist report, Exhibit 54, that the 1988 map showing bedrock was unreliable. He argued that the Appellant's other maps, showing an absence of bedrock, might themselves be unreliable. Mr. Mullen acknowledged that the bedrock does not show up in the road cuts for Rosario Road, and he acknowledged that he did not know the source of the 1988 map's conclusion that bedrock is present. He did cite Mr. Wooding's testimony that Mr. Wooding had encountered bedrock in this area.

Mr. Mullen testified that any glacial till present on the site was in the central or eastern portions, where its removal would not result in any westerly or northwesterly groundwater flow, even if there turned out to be no bedrock to the northwest.

The Hearing Examiner asked whether Mr. Mullen had any source, other than water chemistry, for his belief that groundwater does not flow northwesterly to any great extent. Mr. Mullen said he did not. Mr. Mullen then walked through the distributions of cations (positively-charged ions) and anions (negatively-charged ions) in the water samples, as described in his report. He noted there are differences in the distribution between the springs and the majority of the wells, though not all the wells. He noted that not all elements are similar across all samples—some elements are similar, others different. The most significant component, in his mind, was the nitrates, which he said likely came from human activities. Nitrates were not detected in the MW-1 test wells but were detected in North Spring and Dodson Spring. Mr. Mullen argued that the springs must be receiving nitrate-laden waters from some source other than the mine area, which means waters enter the springs from a location other than the mine. Mr. Mullen did acknowledge that MW-2, nearest the Dodson Spring, does contain nitrates, although he was unable to explain its sources. Still, he believed the cation and anion differences, between MW-2 (and MW-1) and the springs, was sufficient to conclude the waters are not linked.

Mr. Mullen testified that his report did not contain information about coastal bluff retreat rates because he had not been asked to perform such an analysis. *Testimony of Thomas Mullen.*

29. Alan Wald, Third-Party Reviewer for the County, testified about his report, Exhibit 51. Mr. Wald testified that chemical analysis of the type performed by Mr. Mullen could be a valid means of determining hydroconnectivity, because water picks up different chemicals as it passes through different substrates.

Mr. Wald emphasized that a groundwater flow path is influenced both by gradient and by hydraulic conductivity. It does not always necessarily flow down the steepest gradient. As Mr. Wald saw it, the mine expansion was proposed in an area high in sand and gravel, which has a high degree of hydraulic conductivity. Bedrock, obviously, has a very low degree of hydraulic conductivity, so if there were bedrock to the northwest, it would block flow in that direction. But Mr. Wald believed there was a second block to the flow path in the northwesterly direction, unrelated to the possible presence of bedrock. In the well log for MW-1, there was a layer of fine sand. Mr. Wald testified that fine sand has low hydraulic conductivity. Thus, even if there were no bedrock to the northwest, the presence of fine sand would serve as a block to northwesterly flow.

Mr. Wald also testified that the steep gradient between MW-1 and the North Spring was evidence of a *lack* of hydraulic connection. If the North Spring were connected to the

same aquifer as MW-1, and if the hydraulic conductivity between the two areas were similar, then North Spring should have approximately the same groundwater level as MW-1. The fact that its groundwater is different points to some hydraulic disconnection between the two. The disconnection might be bedrock, or it might be a layer of fine sand, but there had to be some kind of disconnection or else the water levels would be more similar. The water chemistry tests further confirmed Mr. Wald in his belief of a hydraulic disconnection.

Mr. Wald testified that he had only recommended a 100-foot buffer on the western edge of the mine as a precaution against the slight chance of northwesterly flow. He could not find any such flow path.

Mr. Wald testified that, in his mind, the absence of coastal bluff erosion review and landslide hazard review in Mr. Mullen's report was justified. There being no groundwater connection between the proposed mine expansion area and the coastal bluffs, there was no reason to analyze those issues. *Testimony of Alan Wald.*

30. Kyle Loring, Attorney for Appellant Evergreen Island, argued that the Applicant had failed to provide the evaluation of coastal bluff erosion and landslide hazard specifically called for in the Board's second remand order. To the extent that information was present at all, it had been presented by the County's third-party reviewer, not the Applicant. Yet it was the Applicant's job to satisfy the remand order, not the County's job. Mr. Loring described the promises made in 2022 to use Canyon Environmental Group to provide a geohazard review, as opposed to some other firm, but the Applicant had never hired Canyon. *Testimony of Kyle Loring.*

31. Dan McShane, Geologist for Appellant Evergreen Island, testified about his report, Exhibit 54. His first point was there is a 22-foot gradient between the groundwater level at MW-1 and North Spring to the northwest, as depicted in the Applicant's report. This 22-foot gradient would be a major hydraulic driver in the direction of North Spring. Mr. McShane did not agree with the rationale of Mr. Wald—which was advanced for the first time during Mr. Wald's testimony, not in Mr. Wald's third-party review—that fine sand would serve as a hydraulic block to the gradient-driven northwesterly flow. Mr. McShane claimed that the well log for MW-1 indicates sand and gravel throughout almost the entirety of the well, not the fine sand described by Mr. Wald.

Mr. McShane also cast doubt on the finding that the sand from the monitoring is dry (which, if true, could indicate a lack of groundwater infiltration). He noted that the log for MW-1 used the word dry but had provided no measurement of the moisture content of the soil. The log from MW-2 never described the soil as dry. He noted the heaving sands discovered in a portion of MW-1, which he said was a likely sign of groundwater at shallower depth. Mr. McShane argued that U.S. Geological Survey analysis of soils

similar to ones present at the mine site had indicated that this type of soil does infiltrate water.

Reviewing the well log of MW-1 with the Hearing Examiner, Mr. McShane observed that, below a certain depth, the soil does, indeed, cease to contain sand and gravel and instead contains only sand of various grain sizes. But he did not concede Mr. Wald's point that the presence of sand only (as opposed to gravel and sand) would create a block to groundwater flow. Mr. McShane called up the well logs for the existing wells to the north, northeast, and east of the mine site—the direction where Mr. Mullen and Mr. Wald believe groundwater is flowing—and pointed out that the soil composition in these wells is not just sand and gravel but also contains substantial portions that are sand only, or else clay. Mr. McShane argued that the soil composition between MW-1 and the existing wells is, broadly, similar. If sand were, in fact, creating a block to groundwater flow, then it ought to block groundwater from flowing toward the existing wells, but that is exactly the direction that Mr. Mullen and Mr. Wald claimed groundwater is flowing. Therefore, sandy soils could not be creating a block to groundwater flow. Even if the sand to the northwest were finer than the sand to the north, northeast, or east, still the groundwater would be able to flow through fine sand, just not as quickly. In any event, certainly there was not a sufficient difference in soil composition to overcome the effects of the 22-foot gradient.

Looking to rebut the idea that bedrock, as opposed to fine sand, could be the source of a supposed block to a northwesterly flow path, Mr. McShane next walked the Hearing Examiner through the competing maps of bedrock in the vicinity of the proposed mine expansion area. Mr. McShane pointed out that only one map shows bedrock extending to part of the proposed mine expansion area, and no map shows bedrock standing between the northernmost areas of the proposed expansion and North Spring. Furthermore, the more detailed maps show bedrock only on Edith Point itself, not in a position to reach any portion of the site.

A critical part of Mr. McShane's argument on bedrock was his own ground-truthing. Having walked the roadbed of Rosario Road and having walked the coastal bluffs, he had seen no evidence of bedrock anywhere between the proposed mine site and the springs in the coastal bluff to the northwest. LIDAR imagery also showed no evidence of bedrock. Mr. McShane argued that, if the Applicant were going to rely on bedrock to disregard the 22-foot gradient between the mine site and the springs, the Applicant ought to have performed some ground-truthing of its own to determine whether the bedrock actually exists.

Mr. McShane testified that there are, in fact, three springs in the northwest coastal bluffs, which he had seen personally during his site visits. The Applicant and third-party reviewer had never visited the coastal bluffs and had only identified one spring to the

northwest, the North Spring. Especially in light of the Applicant's argument that a notional lobe of bedrock was deflecting groundwater flow, it would have been important for the Applicant to identify all springs to ensure that the supposed lobe of bedrock was deflecting water away from all of them.

Based on his visits to the slopes, Mr. McShane argued that the slopes are unstable and that landslide is a real risk. The magnitude of that risk had never been evaluated by either the Applicant or the third-party reviewer. Mr. McShane also reiterated the argument in his report that the coastal bluff retreat rate identified by Keuler and cited by Mr. Wald (but not by the Applicant's geologist, Mr. Mullen) applied only to areas south of the coastal bluffs in question here. *Testimony of Dan McShane.*

32. At the Hearing Examiner's request, Mr. Wald returned to the stand to respond to Mr. McShane. Mr. Wald testified that the County staff had specifically asked him to look into the question of coastal bluff erosion.

Mr. Wald testified that the maps showing different lobes of bedrock in different locations around Edith Point were merely surficial maps. They were never intended to show subsurface conditions. The only way to determine the presence of bedrock for sure would be exploratory drillings, which no one had done. Mr. Wald discounted Mr. McShane's observations that there is no bedrock in the road cut for Rosario Road or along the coastal bluffs. Mr. Wald gave more credence to Mr. Wooding's detections of bedrock during his excavations in the vicinity of Edith Point, although Mr. Wald conceded that he, personally, had not visited the road cut. Mr. Wald also doubted Mr. McShane's opinion that LIDAR was an effective method for detecting subsurface bedrock.

Mr. Wald reiterated his testimony that the groundwater contour lines, which he developed based on the groundwater levels measured in the wells, indicated a northward flow path, not northwest. The northward flow path was inferred due to the decreasing elevation of groundwater in a northerly direction. Mr. Wald acknowledged that the steepest decrease in elevation is to the northwest, not the north. But despite the much steeper decrease in the northwesterly direction, he argued that there simply could not be a flow path in that direction. Mr. Wald refused to acknowledge that the gradient to the northwest could create a flow path. The only flow path he was willing to acknowledge was the one to the north, which is not as steep as the one to the northwest. There must be something blocking the flow to the northwest, although he could not say for sure what that something was.

Mr. Wald agreed with Mr. McShane that glacial till is present through the proposed mine area, not just in the center and eastern parts. *Testimony of Mr. Wald.*

33. Mr. Loring returned to the stand. He argued that the Applicant and third-party reviewer had not provided the study of northwesterly flow that the BOCC had demanded. Instead, they had simply assumed northwesterly flow was impossible. Mr. Loring argued that the Applicant had failed to provide the assessment of soil conditions required by the code. The inconsistent maps showing bedrock in various possible locations were not an assessment of the true geologic conditions. Mr. Loring also cast doubt on the conditions under which the well measurements were taken. Mr. Loring argued that Mr. Wald's justifications for the northerly as opposed to northwesterly flow kept shifting, and that he seemed to have decided a priori that water must be going north, rather than looking at the actual evidence, primarily the northwesterly gradient. Mr. Loring repeated the request in his prehearing public comment that the SUP be denied outright this time, because the Applicant had repeatedly failed to provide the specific analyses demanded by the BOCC and had failed to demonstrate that the mine would not cause adverse groundwater flows to the northwest. *Testimony of Kyle Loring.*
34. Franky Parker, President of Appellant Sunset Lane Association, pointed out that individual elements in the water chemistry results vary from well to well. He argued that there is no consistent pattern to the results that would support an inference that the springs are disconnected from the test well or the existing wells. Mr. Parker also displayed the LIDAR imagery from the third-party report to show that the spring is lower in elevation than the mine site, implying that groundwater must flow toward the spring. Mr. Parker agreed with Mr. McShane that there are three springs in the northwest bluffs, only one of which had been identified by the Applicant. Mr. Parker argued that the code requires all springs that could be affected by the mine to be identified, which the Applicant had failed to do. Mr. Parker also pointed out that the BOCC's second remand order called for evaluation under different mining scenarios, which had not been provided. *Testimony of Franky Parker.*
35. David Hulton testified that he is director of the Del Mar Community Association. He testified that property owners to the west of the mine could be affected, too, not just owners to the northwest. Mr. Hulton suggested that the mine could cause erosion that could destroy the water supply for his association's members. He suggested the SUP should be denied, but if it were approved, he wanted to require the Applicant to obtain insurance to cover any landslide-related losses to the community. *Testimony of David Hulton.*
36. Heidi Fish testified that the County had "signed off" on homeowners building their homes so close to the eroding coastal bluffs, and this sign-off by the County had constituted an assurance by the County that the risk of building on the bluffs was acceptably low. But the Applicant was now proposing to change the risk level with this mine. She believed the County had an affirmative duty to defend its own supposed past

assurances to homeowners and protect those homeowners from any increased risk of the bluffs eroding. *Testimony of Heidi Fish.*

37. Mr. Cricchio returned to the stand to comment that nothing he had heard during the hearing had changed his initial recommendation to the Hearing Examiner. *Testimony of Kevin Cricchio.*
38. Mr. Mullen returned to the stand to respond to Mr. McShane and Mr. Wald. Mr. Mullen testified that the sand detected in MW-1 would, indeed, serve as a barrier to groundwater flow, compared with sand and gravel, which is more conducive. He argued that, if the conductivity were the same throughout the area, then the groundwater level at North Spring would be much closer to that of MW-1. The fact that the groundwater level is different means there must be some difference in conductivity. If there were actually a difference in groundwater level related to slope but not conductivity, then there would be much more groundwater coming out at North Spring. Mr. Mullen admitted, however, that he had never evaluated how much groundwater is actually coming out at North Spring. He said there might or might not be a high flow rate coming out at North Spring.

Mr. Mullen argued that the bedrock is actually farther south of North Spring, not in a position to block groundwater flow. Thus, the block in the flow path must be due to conductivity, not bedrock. *Testimony of Thomas Mullen.*

39. Ryan Mullen (no relation), of Aspect Consulting, testified that he was the geologist who observing the drilling of the two test wells. He testified that he was the author of the soil descriptions in the well logs, based off soil samples he collected from the drill cutting every five feet of depth. He did not believe soil had been desiccated by the drilling process; water would have been obvious. Mr. Mullen was skeptical the drillers had encountered heaving sands. That was just what the drillers had told him, but he did not think it was correct. He also did not refute the drillers' use of the words "heaving sands." In the end, despite having entered the words "heaving sands" in the drilling log, and despite being unwilling to call the drillers mistaken in their use of the words "heaving sands," he nonetheless concluded that heaving sands were absent. Mr. Mullen testified that he was confident in the water levels measured in the wells. *Testimony of Ryan Mullen.*
40. Mr. Wooding returned to the stand. Mr. Wooding testified that nitrates in MW-2 likely came from houses near the test well that have septic systems. He testified that glacial till was present in the center and east part of the existing pit, but not to the west. *Testimony of William Wooding.*

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41. Mr. Cricchio testified that the County staff recommends that the Hearing Examiner approve the SUP request, with the previous conditions from the previous decisions plus the new condition of a 100-foot buffer in the western portions. Mr. Wooding agreed to all conditions, although he would have preferred only a 50-foot buffer, because he believed a 100-foot buffer was superfluous given the absence of any groundwater risks. *Testimony of Kevin Cricchio; Testimony of William Wooding; Exhibit 53, Second Addendum to Staff Report, page 9.*

Post-Hearing Public Comments

42. Commenters argued that a geologically hazardous mitigation plan pursuant to SCC 14.24.430 should have been provided. Commenters disputed the notion that bedrock is present in a position to block a northwesterly flow path and called for new, site-specific investigations. Commenters argued that the Applicant's materials were non-responsive to the specific requirements set forth in the BOCC's second remand order. Commenters cast doubt on the timing of the water level measurements taken in the existing wells. Evergreen Island provided its hearing PowerPoint. Commenters also raised numerous issues outside the scope of the second remand order, including issues relating to the County's SEPA determination (which was not appealed), County land acquisition, and loss of vegetation. *Exhibit 58.*

CONCLUSIONS

Jurisdiction

The Hearing Examiner generally has jurisdiction to hear and decide requests for special use permits (SUPs) related to mining. *SCC 14.16.440(9)*. The Board of County Commissioners remanded the Hearing Examiner's original decision for further consideration by the Hearing Examiner in Resolution R20230197, dated October 6, 2023. *Exhibit 46.*

Criteria for Review on Remand

As noted above, the Board of County Commissioners upheld the Hearing Examiner's original decision on all issues, except the Hearing Examiner was required to consider the following on remand:

[P]reparation of a [Geologically Hazardous Site Assessment] consistent with the requirements of SCC 14.24.400–.420, including but not limited to SCC 14.24.420(e) and (f), with the Hearing Examiner considering any necessary evidence and imposing any additional conditions warranted by the foregoing analysis.

In issuing this remand order, it is the Board's intention that additional physical investigation and analysis will be performed to assess the north/northwestern groundwater flow and potential impacts under different mine development

scenarios, rather than mere validation of the inferences and methodologies used in the original Maul Foster report.

Exhibit 46.

The requirements for a geologically hazardous site assessment report in SCC 14.24.400 through - .420 are:

Geologically hazardous areas shall be designated consistent with the definitions provided in WAC 365-190-030 and 365-190-120. These include areas susceptible to the effects of erosion, sliding, earthquake, or other geologic events. They pose a threat to the health and safety of citizens when incompatible residential, commercial, industrial, or infrastructure development is sited in areas of a hazard. Geologic hazards pose a risk to life, property, and resources when steep slopes are destabilized by inappropriate activities and development or when structures or facilities are sited in areas susceptible to natural or human-caused geologic events. Some geologic hazards can be reduced or mitigated by engineering, design, or modified construction practices so that risks to health and safety are acceptable. When technology cannot reduce risks to acceptable levels, building and other construction in, above and below geologically hazardous areas should be avoided.

SCC 14.24.400.

Geologically hazardous areas shall be classified as “known or suspected risk” or “unknown risk.” Areas of known or suspected risk are indicated in Subsections (1) through (5) of this Section.

...

(2) Landslide hazards are areas potentially subject to landslides based on a combination of geologic, topographic and hydrologic factors. The following are known or suspected landslide hazards:

...

(f) Coastal bluffs.

SCC 14.24.410.

(1) If the Administrative Official determines that the proposed development activity is located within 200 feet of an area of known or suspected risk as indicated in SCC 14.24.410, or within a distance from the base of a landslide hazard area equal to the vertical relief, and that the geologic condition may pose a risk to life and property, or other critical areas on and off the project area, a geologic hazard site assessment as indicated in this Section shall be required. This site assessment shall be prepared by a qualified professional.

(2) The geologically hazardous area site assessment shall classify the type of geologic hazard(s) in accordance with SCC 14.24.400 and 14.24.410. In addition

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to the requirements of SCC 14.24.080, the site assessment shall include the following:

- (a) A site plan depicting the height of slope, slope gradient and cross section indicating the stratigraphy of the site. The site plan shall indicate the location of all existing and proposed structures and any significant geologic features such as outcrops, springs, seeps, ponds, streams or other water bodies; and
- (b) An assessment of the geologic characteristics and engineering properties of the soils, sediments, and/or rock of the subject property and potentially affected adjacent properties. Soils shall be described in accordance with the Unified Soil Classification System; and
- (c) A description of load intensity, surface and groundwater conditions, public and private sewage disposal systems, fills and excavations and all structural development; and
- (d) A description of the extent and type of vegetative cover including tree attitude; and
- (e) For potential coastal bluff geologic hazards: estimate of the bluff retreat rate, which recognizes and reflects potential catastrophic events such as seismic activity or a 100-year storm event; and
- (f) For potential landslide hazards: estimate slope stability and the effect construction and placement of structures will have on the slope over the estimated life of the structure. Quantitative analysis of slope stability or slope stability modeling may be required by the Administrative Official; and
- (g) Additional site assessment elements may be required by the Administrative Official.

(3) Properties containing geologically hazardous conditions identified by the Administrative Official and the qualified professional shall require a geologically hazardous area mitigation plan.

SCC 14.24.420.

Conclusions Based on Findings

- 1. The Applicant's Geologically Hazardous Area Site Assessment Is Not Consistent with the Criteria on Second Remand.** In weighing the evidence above, the Hearing

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Examiner is confronted with a classic battle of the experts. On the one hand, the Appellant's geologist, Dan McShane, is convinced that groundwater from at least the western portion of the proposed mine expansion area flows to the northwest, toward the coastal bluffs, and that disturbance to glacial till on the western part of the expansion area could increase groundwater infiltration and groundwater flow toward the coastal bluffs, where it would increase the already substantial danger of landslides. On the other hand, the Applicant's geologist, Thomas Mullen, and the County's third-party reviewer, Alan Wald, are equally convinced that all or almost all groundwater flows to the north and northeast and thence toward Lake Erie, where it poses no threat to the coastal bluffs. Mr. Mullen and Mr. Wald disagree as to whether glacial till exists on the western portion of the mine site, with Mr. Mullen saying it does and Mr. Wald saying it does not. Mr. Wooding, who has been excavating at the existing mine for decades, says it does not.

From the Hearing Examiner's perspective, the quality of the experts' evidence on all sides is poor. It appears to the Hearing Examiner that each expert investigated only until he uncovered the first fact that would support his position, and then stopped investigating before he could uncover any other facts that would tend to support or undermine his position. Mr. McShane, for example, rests his case on the measured gradient between the groundwater level measured in test well MW-1 and the groundwater level measured in the North Spring in the coastal bluff to the northwest. Certainly, the 22-foot gradient between the two location is persuasive evidence that groundwater might flow from MW-1 toward the North Spring. But if that is indeed the groundwater flow path, then as Mr. Mullen pointed out, the North Spring would be receiving a large volume of groundwater infiltrated from a wide area and should, therefore, demonstrate a rapid rate of discharge. Mr. McShane never measured the discharge rate at the North Spring (or any of the other springs he detected in the coastal bluffs) to determine whether the amount of groundwater these springs are receiving and discharging is consistent with the size of the groundwater catchment basin he believes feeds these springs. The gradient led Mr. McShane to assume groundwater is flowing in this direction, but he never checked to see if it actually is.

Mr. Mullen's work is no more rigorous than Mr. McShane's. Mr. Mullen entirely disregarded the gradient between MW-1 and North Spring and focused solely on the much shallower gradient between MW-1 and the existing wells to the north and northeast. He denied that any substantial flow path toward the northwest could exist. Some subterranean feature, he believed, was blocking it. In his initial report, he presented bedrock as that blocking feature, based on a 1988 map of surficial bedrock. Much like Mr. McShane, Mr. Mullen then halted his investigation as soon as he uncovered the first fact that would support it—here, the map showing the bedrock. He never checked to see whether bedrock actually exists in a position to block the flow path to the northwest.

Mr. McShane's responsive materials effectively undermined the bedrock argument. Not only do other maps show a less extensive lobe of bedrock, none of the maps shows bedrock in the precise position it would need to be to block the flow path to the coastal bluffs to the northwest. In addition, Mr. McShane's observation of the coastal bluffs and road cut of Rosario Road show no bedrock. Mr. Wooding offered some evidence in favor of the bedrock theory based on his observations constructing homes in the vicinity of Edith Point, but even Mr. Wooding was not able to place bedrock farther north than 100 feet north of Edith Point Road, so even Mr. Wooding cannot identify bedrock in a position to block a flow path to the coastal bluffs. The preponderance of the evidence tilts against the bedrock theory. The ultimate validation of the bedrock theory would have been an excavation to see if bedrock exists in a location to block the northwestern flow path, but Mr. Mullen never performed such an investigation. Perhaps most damningly, Mr. Mullen appeared to abandon the bedrock theory altogether when he returned to the stand to respond to Mr. McShane and Mr. Wald. He conceded that the only known bedrock is to the south of the flow path toward the coastal bluffs.

Mr. Wald came to the hearing with an alternative theory about what blocks the northwesterly flow path—a theory which did not appear in his written report nor in any other. According to Mr. Wald, fine sand in the soils to the northwest block the flow path in that direction. Mr. Wald's basis for this theory is the various grades of sand discovered in MW-1, some of which were fine sands. There are two problems with the sand-block theory, however. First, MW-1 sits along the flow path to the north and northeast. It does not sit along the flow path to the northwest. The presence of fine sand in MW-1 does not necessarily indicate that fine sand exists in the flow path to the northwest. If anything, the fine sand in MW-1 would tend to block flow in the northerly and northeasterly direction. Second, as Mr. McShane pointed out, the existing wells to the north and northeast also contain sands of various grades. If sand blocks groundwater flow to the northwest in the manner suggested by Mr. Wald, then it ought to block flow in the directions of the existing wells, too, yet those are the directions Mr. Wald and Mr. Mullen believe it is flowing. The ultimate validation of the sand-block theory would have been a test well in the northwesterly direction to determine if sand exists in that direction that is less conducive than the sand in the northerly, northeasterly, and easterly directions, but Mr. Wald performed no such investigation. Instead, he identified sand in MW-1 and decided he did not need to check for it anywhere else. None of these experts went far enough in their investigations to validate their claims against the attacks from the other side.

The evidence from the water chemistry testing is simply inconclusive. For any particular element, it is possible to identify sampling sites where it does occur and other sites where it does not. No consistent pattern emerges across all of the elements. Taking the elements as a whole, the most distant outliers were the East Well and the Wooding Well, which, if anything, would indicate that groundwater may be *less* likely to flow in those

directions. The water chemistry does not add up to a clear picture demonstrating flow in any particular direction.

The Hearing Examiner is left uncertain as to which direction groundwater flows from the proposed mine expansion area. Mr. McShane has his gradient theory, but it is unsupported by flow rates from the springs that would tend to support it. Mr. Mullen and Mr. Wald have their bedrock and sand-block theories, but those are not supported by a finding of bedrock or non-conductive sand in the northwesterly direction.

In the absence of a clear picture, the Hearing Examiner must fall back on the burden of proof and the standard of proof. Here, the Applicant has the burden to establish that the impacts of the proposed mine expansion area can be mitigated to “protect the general welfare, health and safety.” *SCC 14.16.440(9)(a)*. The BOCC has made clear what standard of proof it expects to see from the Applicant: a geologically hazardous site assessment containing all of the elements in SCC 14.24.400 through 420, with a special focus on “additional physical investigation and analysis ... to assess the north/northwestern groundwater flow and potential impacts under different mine development scenarios, rather than mere validation of the inferences and methodologies used in the original Maul Foster report.”

The Hearing Examiner concludes that the Applicant has failed to meet the standard of proof required of it. First, the Applicant’s report does not satisfy all the requirements of SCC 14.24.420:

- The Applicant’s report includes only one spring in the northwestern coast bluffs, the North Spring, instead of the three springs that are known to be present, thus failing to satisfy SCC 14.24.420(2)(a) (“ The site plan shall indicate the location of ... any significant geologic features such as outcrops, springs, seeps...”).
- The Applicant’s report does not include a description of the groundwater conditions at the coastal bluffs—for example, by failing to evaluate the flow rate from the North Spring or any other spring, which could have validated or refuted Mr. McShane’s gradient theory—thus failing to satisfy SCC 14.24.420(2)(c) (“A description of ... surface and groundwater conditions...”).
- The Applicant’s report does not contain a description of coastal bluff retreat rates or an estimation of the coastal bluffs’ slope stability, thus failing to satisfy SCC 14.24.420(2)(e) and (f), even though those sections were specifically called out for special attention in the BOCC’s second remand order.

In his previous decision, the Hearing Examiner was willing to overlook some of these deficiencies in earlier iterations of the Applicant’s geologically hazardous site assessment. At that time, the Hearing Examiner was persuaded that the theory of groundwater flow in a northwesterly direction was merely speculative and therefore did

not require strict adherence to SCC 14.24.420. The Hearing Examiner at that time had explicitly been granted discretion by the BOCC to order or not order certain elements of SCC 14.24.420 to be satisfied. The Hearing Examiner exercised that discretion based on the quality of the evidence at that time. This time, however, there is specific direction from the BOCC not to omit any element of SCC 14.24.420, and to pay particular attention to SCC 14.24.420(2)(e) and (2)(f). In addition, the quality of the evidence is different this time around. This time, there is the 22-foot gradient from MW-1 to the North Spring. Although the evidence for a northwesterly flow path is still far from conclusive, it is stronger than it was during the previous hearing, and so the Hearing Examiner would not waive the requirements of SCC 14.24.420 even if the BOCC had not prohibited such waiving. Therefore, the Hearing Examiner will no longer overlook the Applicant's omissions of some of the required elements of SCC 14.24.420. The third-party reviewer may have partially cured the omission of the coastal bluff retreat rate, but even so, the other required elements of SCC 14.24.420 were not provided.

The BOCC's second remand order also makes clear that the Applicant is to evaluate the possibility of a northwesterly flow path specifically—not just attempt to validate a northerly or northeasterly flow path. The Applicant failed to do so. The Applicant's first theory of the bedrock block was not supported by any attempt to locate actual bedrock. That theory was abandoned during the hearing, as described above. The Applicant's second theory of the sand-block was also not supported by evidence of sand in a position to block the northwesterly flow path. At best, the Applicant has found sand in a position to block the northerly flow path, but that is not what the BOCC required the Applicant to investigate. It is also unclear why, if the sand-block theory is correct, the sand in the northerly, northeasterly, and easterly directions is not blocking flow in those directions. The quality of the evidence for the sand-block theory does not rise to the level demanded by the BOCC. For these reasons, the Hearing Examiner concludes that the Applicant has not met its burden of proof. *Findings 1–42.*

- 2. The Applicant's Failure to Satisfy the BOCC's Order Is Grounds for Denial.** In the BOCC's second remand order, the Hearing Examiner was instructed to “[consider] any necessary evidence and [impose] any additional conditions warranted by the foregoing analysis.” In the strictest reading of the order, the Hearing Examiner was instructed only to impose new conditions of approval, not revisit the decision to approve the project. By failing to provide the specific information the Hearing Examiner was ordered by the BOCC to consider, however, the Applicant has rendered it impossible for the Hearing Examiner to determine what conditions of approval, if any, would result in a mine that would “protect the general welfare, health and safety.” *SCC 14.16.440(9)(a)*. The Applicant has had three chances now to demonstrate that its mine will not increase the landslide risk to the coastal bluffs and has failed at each turn to provide sufficient evidence. The Hearing Examiner concludes that a third remand (and a fourth hearing) to gather more evidence is not warranted, because the evidence was already ordered to be

produced at this hearing. Because the evidence that was produced is not sufficient to demonstrate compliance with SCC 14.24.420 and does not satisfy the terms of the BOCC's second remand order, the proper action at this point is denial. *Findings 1–42.*

DECISION

Based on the preceding findings and conclusions, the request for a mining special use permit to allow the expansion of an existing gravel mine located in the vicinity of Lake Erie, off Rosario Road on Fidalgo Island, from its current 17.78 acres to the proposed 53.5 acres, is hereby **DENIED**.

DECIDED this 22nd day of May 2024.



ALEX SIDLES
Hearing Examiner