Memo to Hearing Examiner:

HEARING DATE: May 8, 2024

SUBJECT: Hearing on Remand; Lake Erie Gravel/Sand Mine Expansion, Special Use Permit, PL16-0556

STAFF CONTACT: Kevin Cricchio, AICP, ISA, Senior Planner

Approved for Submittal to Hearing Examiner by	
X	Jack Moore, Planning Director

Action Type	
X	Public Hearing
X	Discussion
X	Possible Action

SUMMARY & BACKGROUND:

At 9:00 AM on Wednesday, May 8, 2024, an open-record public hearing will be conducted by the Hearing Examiner to review the remanded items required by the Hearing Examiner on October 6, 2023, for Special Use Permit Application PL16-0556 submitted by Lake Erie Pit 1, LLC requesting the expansion of an existing gravel/sand mining operation from 17.78 acres to approximately 53.5 acres.

Per the direction of the Hearing Examiner, the applicant was required to prepare a Geologically Hazardous Site Assessment (GHSA) consistent with the requirements of Skagit County Code 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 his remand order, the GHSA needed to include a physical investigation and analysis performed to assess the north/northwest 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 requested GHSA was submitted to Skagit County PDS on February 29, 2024, and determined complete on April 1, 2024, following a third-party/peer review by Facet (DCH/Watershed Company). The subject site is located within the Rural Resource-Natural Resource Lands (RRc-NRL) Zoning/Comprehensive Plan Designated Area and designated within the Mineral Resource Overlay.

RECOMMENDATION:

Based on a review of the application material submitted, special use permit criteria of approval, SEPA environmental checklist, environmental studies, two (2) Third-Party reviews, an issued SEPA Mitigated Determination of Non-Significance (MDNS), and the

Findings of Fact/Staff Report (and Addendums thereto), staff recommends to the Hearing Examiner that the subject Special Use Permit application be approved subject to conformance with staff's suggested conditions of approval (as is listed in the Exhibit #1, Exhibit #38 and Exhibit #53).

Attachments:

OLD EXHIBITS (FROM ORIGINAL STAFF REPORT, DATED AUGUST 26, 2020); EXHIBITS #1-#23 HAVE ALREADY BEEN PROVIDED TO THE HEARING **EXAMINER'S OFFICE**

NEW EXHIBITS (EXHIBITS ADMITTED INTO THE RECORD AT 6/28/2023 HEARING ON REMAND; EXHIBITS #24-#42:

Exhibit #24, Hearing Examiner's Approval of Special Use Permit, PL16-0556, (Click Here)

Exhibit #25, Appellant's Appeal of Hearing Examiner Decision, (Click Here)

Exhibit #26, Board of County Commissioners Remand/Resolution to the Hearing Examiner, (Click Here)

Exhibit #27, Hearing Examiner Referral to Skagit County Planning & Development Services, (Click Here)

Exhibit #28, March 23, 2021, Letter from PDS to the Applicant Requesting Additional Info; May 27, 2021, Letter from PDS to Applicant with deadline for Additional Info; July 21, 2021, Letter from PDS Denying Special Use Permit Application, (Click Here)

Exhibit #29, Applicant's Appeal of Planning & Development Services Denial of Special Use Permit, (Click Here)

Exhibit #30, Hearing Examiner's Order Granting Appeal & Reversing County's Denial, (Click Here)

Exhibit #31, Geologic Hazard Site Assessment (Received August 12, 2022), (Click Here)

Exhibit #32, Evergreen Island's Letter Dated: 11/18/2022 + Stratum Group Review of Geologic Hazard Site Assessment (Dated November 15, 2022), (Click Here)

Exhibit #33, Third Party Review of Geologic Hazard Site Assessment & Response to Evergreen Island's Letter dated 11/18/2022 (Received January 19, 2023), (Click Here)

Exhibit #34, Evergreen Island Email & Letter Regarding Watershed Company Response to Evergreen Island's Communication of 11/18/2022 + Stratum Group Letter, (Click Here)

Exhibit #35, Revised Third Party Review of Geologic Hazard Site Assessment & Response to Evergreen Island's Letter dated 11/18/2022 (Received March 31, 2023), (Click Here)

Exhibit #36, Notice of Public Hearing (Published on 6/8/2023), Neighbor Labels, & Parties of Record, (Click Here)

Exhibit #37, Skagit County GIS Map of Subject Parcels & 300-Foot Buffer, (Click Here)

Exhibit #38, Addendum to Staff Report, (Click Here)

Exhibit #39, Memorandum to Hearing Examiner, dated June 28, 2023, (Hearing Examiner's Office has this)

Exhibit #40, Third Round of Public Comments, various dates, (Hearing Examiner's Office has this)

Exhibit #41, Staff Hearing Presentation, presented June 28, 2023, (Hearing Examiner's Office has this)

Exhibit #42, Presentation of Tom Glade, presented June 28, 2023, (Hearing Examiner's Office has this)

NEW EXHIBITS SUGGESTED BY PDS STAFF AT THE 5/8/24 HEARING ON REMAND; EXHIBITS #43-#54:

Exhibit #43, Hearing Examiner's Approval of Special Use Permit, PL16-0556 on Remand, dated: July 13, 2023, (Click Here)

Exhibit #44, Notice of Decision, dated: July 13, 2023, (Click Here)

Exhibit #45, 2 Appeals Received: Evergreen Island, PL23-0363 & Sunset Lane Association, PL23-0380, (Click Here)

Exhibit #46, BOCC Remand Order, Resolution #R20230197, Dated October 6, 2023, PL23-0380, (Click Here)

Exhibit #47, Hearing Examiner Remand Order to PDS, Dated: October 6, 2023, (Click Here)

Exhibit #48, Skagit County PDS Letter to Applicant, Dated: October 10, 2023, (Click Here)

Exhibit #49, 90-Day Extension of Time to Submit Additional Information Requested, Dated: January 4, 2024, (Click Here)

Exhibit #50, Northwest Groundwater Consultants, Geohazard Site Assessment, Dated: February 29, 2024, Dated: April 1, 2024, (Click Here)

Exhibit #51, Facet Peer Review/Third-Party Review, Dated: April 1, 2024, (Click Here)

Exhibit #52, Notice of Public Hearing, (Click Here)

Exhibit #53, 2nd Addendum to Staff Report, Dated: May 8, 2024, (Click Here)

Exhibit #54, Evergreen Island Response to HGC & Facet, Dated: April 19, 2024, (Click Here)

Exhibit #55, Loring Advising/Evergreen Island's, Remand Requests Unaddressed Letter, Dated: June 23, 2023, (Click Here)

Planning & Development Services

1800 Continental Place ▪ Mount Vernon, Washington 98273
office 360-416-1320 ▪ pds@co.skagit.wa.us ▪ www.skagitcounty.net/planning

2nd ADDENDUM TO STAFF REPORT (EXHIBIT #53):

DATE: **MAY 8, 2024**

TO: **HEARING EXAMINER**

FROM: **KEVIN CRICCHIO, AICP, ISA, SENIOR PLANNER**

RE: **PUBLIC HEARING TO REVIEW THE REMANDED ITEMS REQUIRED BY THE HEARING EXAMINER ON OCTOBER 6, 2023, FOR EXPANSION TO LAKE ERIE SAND & GRAVEL MINE, SPECIAL USE PERMIT APPLICATION, PL16-0556**

SUBJECT PARCELS: EXISTING MINE: P19108, P19162, & P19165; EXPANSION TO MINE: P19158, P90028, P19164, P19155, P19161; CONTIGUOUS PARCELS (SAME OWNERSHIP): P19168, & P19163

LOCATION: **INTERSECTION OF ROSARIO ROAD & MARINE DRIVE, FIDALGO ISLAND; LOCATED IN A PORTION OF SECTION 11, TOWNSHIP 34 NORTH, RANGE 01 EAST, WILLAMETTE MERIDIAN**

Dear Mr. Hearing Examiner:

This is the second addendum (**Exhibit #53**) to the original staff report (dated August 26, 2020). The 1st addendum (**Exhibit #38**) to the original staff report was dated June 28, 2023.

This current addendum serves as both a chronology and update on the status of the Lake Erie Special Use Permit application, PL16-0556 that the applicant Bill Wooding/Lake Erie Pit LLC submitted to Skagit County's Planning and Development Services Department on December 2, 2016. The Special Use Permit application requests to expand an existing" gravel mine located on the subject parcel(s) from approximately 17.78 acres to approximately 53.5 acres in size.

Following a review of the application, Planning Department staff deemed the application complete on January 5, 2017. A Notice of Development Application (NODA) was published in the Skagit Valley Herald on February 2, 2017, mailed to neighboring landowners located within 300-feet of the subject parcel(s), and posted onsite as is required by Skagit County Code. The public comment period ended on February 17, 2017.

After the public comment period ended, additional information was requested of the applicant. After this material was submitted to Skagit County as was requested, a SEPA Mitigated Determination of Non-Significance (MDNS) was issued on December 3, 2018. The SEPA

comment period ended on December 21, 2018 and the appeal period ended on January 4, 2019. The SEPA MDNS was posted onsite, published in the Skagit Valley Herald and mailed/emailed to parties of record in accordance with Skagit County Code. No appeals were received.

A Notice of Public Hearing was published in the Skagit Valley Herald on August 6, 2020, posted onsite, and emailed/mailed to both neighboring properties within 300-feet of the subject parcel(s) and parties of record. Another Notice of Public Hearing advertising the continuation of the public hearing was published in the Skagit Valley Herald on September 24, 2020. This notice was also posted onsite, and emailed/mailed to both neighboring properties within 300-feet of the subject parcel(s) and parties of record.

The **Hearing Examiner** conducted an open-record public hearing on August 26, 2020, which was continued to October 14, 2020. The Hearing Examiner **approved** the subject Special Use Permit (**See Exhibit #24**) subject to conditions on November 30, 2020.

On appeal (**See Exhibit #25**), the **Board of County Commissioners remanded** (**See Exhibit #26**) the matter (**Resolution: R20210038**) to the Hearing Examiner to determine if a Geologically Hazardous Site Assessment is needed.

On March 9, 2021, the Hearing Examiner ordered Planning and Development Services (PDS) **(See Exhibit #27)** to direct Wooding to provide such an assessment. The Examiner determined that the appropriate course was to refer the matter to Planning and Development Services (PDS) with instructions to "direct the applicant to prepare a Geologically Hazardous Area Site Assessment consistent with Skagit County Code 14.24.200 – 14.24.420. On receipt of such assessment, PDS shall review it and provide an amended staff report to the Hearing Examiner containing the department's analysis and recommendations in light of the report. Thereafter, the Examiner shall schedule and hold a supplementary public hearing in this matter, limited to comment on the Geologically Hazardous Site Assessment. Following this hearing, based on the record made, the Examiner shall issue a decision imposing such additional conditions, if any, as may be necessary to mitigate risks that have been identified."

On March 23, 2021, a letter written by Skagit County Planning and Development Services Department (**See Exhibit #28**) requesting the applicant prepare a Geologically Hazardous Area Site Assessment and Geologically Hazardous Mitigation Area Plan consistent with Skagit County Code 14.24.420 and 14.24.430 respectively.

On May 27, 2021, another letter (**See Exhibit #28**) was written by Skagit County Planning and Development Services Department reiterating additional information was requested of the applicant on March 23, 2021, and that the deadline to provide this information was 4:30 PM on July 21, 2021. Failure to provide this information would result in the Special Use Permit being denied by Skagit County Planning and Development Services Department.
The 120-days provided by Skagit County Code 14.06.105 for submittal of the information expired on July 21, 2021. On July 20, 2021, the day before the expiration date, Wooding's agent

sent an email stating that a contract with a consultant had been entered and requesting a further extension of time for submitting the required information.

On July 21, 2021, Skagit County Planning and Development Services Department denied the extension request and denied the applicant's (Wooding's) Special Use Permit application (**See Exhibit #28**) for failure to timely supply the requested information.

The applicant appealed (**See Exhibit #29**) this decision by Skagit County PDS. On October 15, 2021, the Hearing Examiner granted the applicant's appeal of the county's decision thereby reversing it (**See Exhibit #30**). According to the Examiner's decision, the application shall remain in good standing through September 2022. During this time the applicant shall have a Geologically Hazardous Site Assessment prepared and shall submit the same prior to the end of September 2022.

On August 12, 2022, the applicant submitted a Geologic Hazard Site Assessment (**See Exhibit #31**) to Skagit County Planning and Development Services Department that was prepared by Wood Environmental and Infrastructure Solutions, Incorporated.

This Geologic Hazard Site Assessment (and subsequent letter from Evergreen Islands) [**See Exhibit #32]** dated November 18, 2022, was forwarded to the county's Third-Party Review consultant -the Watershed Company for review.

On January 19, 2023, the Watershed Company provided Skagit County PDS with their Third-Party Review findings and response to Evergreen Island's November 18, 2022, letter (**See Exhibit #33**).

On March 3, 2023, Skagit County Planning and Development Services Department received both an email and letter from Evergreen Islands along with a response letter from the Stratum Group (**See Exhibit #34**).

On March 31, 2023, Skagit County Planning and Development Services received a revised Third-Party Review and response to Evergreen Island letter dated November 18, 2022 (**See Exhibit #35**). It was revised per Skagit County PDS request for formatting and clarity reasons.

Since the required Geologic Hazard Site Assessment was complete along with the county's Third-Party Review, this matter went back to the Hearing Examiner. The purpose of the hearing was to review the **remanded item(s) required by the Hearing Examiner** on March 9, 2021, for Special Use Permit Application PL16-0556 submitted by the applicant.

A new Notice of Public Hearing (**See Exhibit #36**) was published in the Skagit Valley Herald on June 8, 2023, posted onsite, and mailed to neighboring landowners located within 300-feet of the subject parcels as is required by Skagit County Code. Additionally, the notice of record was both mailed and emailed to all parties of record.

Exhibit #37 prepared by Skagit County's Geographic Information Systems (GIS) Department graphically depicts the subject parcels of the existing mine, proposed expansion thereto, contiguous parcels under the same ownership of the applicant, and the 300-foot buffer for noticing purposes.

Exhibit #38 is the 1st Addendum to original Staff Report.

JUNE 28, 2023, HEARING ON REMAND: ADDITIONAL STAFF SUGGESTED CONDITIONS OF APPROVAL:

In addition to the suggested conditions of approval that can be found in the original Staff Report/Findings of Fact dated August 26, 2020 (**See Exhibit #1**), Skagit County PDS staff suggested at the June 28, 2023, open-record public hearing on remand, the following conditions of approval after a review of the Geologic Hazard Site Assessment and Third-Party Review as follows:

1.	Development shall comply with all recommendations and requirements of the Geologic Hazard Site Assessment dated August 11, 2022, prepared by Wood Environment and Infrastructure Solutions, Inc.
2.	Development shall comply with all recommendations and requirements of the Third-Party Review performed by the Watershed Company.
3.	All applicable permits (local, state, and federal) must be secured before any mining/excavation activities begin onsite. Copies of permits shall be provided to the Skagit County Planning & Development Services Department.
4.	The applicant shall be responsible for reimbursement to Skagit County Planning & Development Services Department for the full cost of mailing(s) and newspaper publication associated with the Notice of Development Application, Notice of Issuance of SEPA MDNS, Notice of Hearing, and Notice of Decision. Payment shall be made prior to any work beginning onsite and grading permit application submittal &/or issuance.
5.	The applicant shall be responsible for reimbursement to Skagit County Planning & Development Services Department for the full cost of Third-Party Review of their Geologic Hazard Site Assessment. Payment shall be made prior to any work beginning onsite and grading permit application submittal &/or issuance.

EXHIBITS:

OLD EXHIBITS (FROM ORIGINAL STAFF REPORT, DATED AUGUST 26, 2020):	
Exhibit #1	Staff Report/Findings of Fact (Dated: August 26, 2020)
Exhibit #2	Special Use Permit Application and Narrative received December 2, 2016
Exhibit #3	Skagit County Zoning and Assessor's map
Exhibit #4	Site Plans and aerial photographs
Exhibit #5	Notice of Development Application, published February 2, 2017
Exhibit #6	SEPA Environmental Checklist, dated June 8, 2017
Exhibit #7	SEPA Mitigated Determination of Non-Significance (MDNS), dated December 3, 2018, and associated SEPA staff report
Exhibit #8	Critical Areas Reconnaissance by Skagit Wetlands and Critical Areas, dated February 24, 2017
Exhibit #9	Hydrogeologic Site Assessment Report by Maul Foster Alongi, dated September 28, 2016
Exhibit #10	Observation Well Installation letter report by Maul Foster Alongi, dated September 28, 2017
Exhibit #11	Letter from McLucas and Associates, responding to the Del Mar comment letter, dated December 19, 2018
Exhibit #12	Letter from Northwest Groundwater Consultants, responding to the Del Mar Comment letter, dated January 3, 2019
Exhibit #13	Lake Erie Pit Well Reconnaissance by Northwest Groundwater Consultants LLC, dated March 11, 2019
Exhibit #14	Lake Erie Gravel Pit Traffic Impact Analysis by Gibson Traffic Consultants, Inc., dated September 2016
Exhibit #15	Addendum to the Lake Erie Gravel Pit Traffic Impact Analysis by Gibson Traffic Consultants, Inc., dated May 12, 2017
Exhibit #16	Traffic Memorandum by Skagit County Public Works, Dated March 1, 2018.
Exhibit #17	Supplemental (traffic) Memorandum by Skagit County Public Works, dated May 2, 2018
Exhibit #18	Lake Erie Pit air quality best management practices by Maul Foster Alongi, dated September 15, 2016
Exhibit #19	Lake Erie Pit Expansion Noise Study by Acoustics Group, Inc,, dated September 16, 2016
Exhibit #20	List of neighboring property owners and parties of record notified of the Public Hearing.
Exhibit #21	A total of eighteen (18) comment letters were received during the comment periods. Fourteen (14) comment letters were received during the notice of development application (NODA) comment period, an additional three (3) comment letters were received during the Notice of Public Hearing (NoPH), and one (1) comment during the SEPA comment period. Comment letters and emails from the NODA, NoPH & SEPA comment periods are attached as Exhibit 21 and are in chronological order of receipt. Comments letters generally

OLD EXHIBITS (FROM ORIGINAL STAFF REPORT, DATED AUGUST 26, 2020):	
	expressed concern about aesthetics, a decrease in water quality of the area, a decrease in slope stability adjacent to Rosario Road, impacts to wetlands found offsite, impacts to fish and wildlife habitat conservation areas, impacts to potential perched/shallow groundwater conditions, increases in traffic, increases in noise and dust generation. Two of comment letters were in support of the proposal. The SEPA comment letter is discussed under Department Findings #6 and the response to the comments is include as Exhibit 9 & 10.
Exhibit #22	The fourteen (14) comment letters received during the NODA comment period were provided to McLucas and Associates, Inc., representing Lake Erie Pit LLC. McLucas and Associates responded to each of the comment letters. The applicants responses are included as Exhibit 22.
Exhibit #23	An additional five (5) comment letters were received outside of the comment periods. All 5 comment letter were from Mr. Andy Dunn, a hydrogeologist with RH2 Engineering. Mr. Dunn represents Bill & Pam Doddridge residing on parcel P19166 to the south of the proposed mine expansion area. The comments are specific to a concern that the gravel mining activities may breach a perched aquifer onsite resulting in subsurface draining Devils Elbow Lake, located on the Doddridge property. The comment letters are included as Exhibit 23. Investigation of their concern included advancing a boring and installation of an observation well near the southern property line, between the lake and the gravel mine. The boring was logged by the hydrogeologist of record and by Mr. Andy Dunn, LHg of RH.2 Engineering. A perched aquifer was not encountered during advancement of the boring to a depth of 277-feet below site grade, an elevation of 168.6 above MSL (see Exhibit 8).

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

NEW EXHIBITS (EXHIBITS ADMITTED INTO THE RECORD AT 6/28/2023 HEARING ON REMAND):	
Exhibit #24	Hearing Examiner's Approval of Special Use Permit, PL16-0556
Exhibit #25	Appellant's Appeal of Hearing Examiner Decision
Exhibit #26	Board of County Commissioners Remand/Resolution to the Hearing Examiner
Exhibit #27	Hearing Examiner Referral to Skagit County Planning & Development Services
Exhibit #28	-March 23, 2021 Letter from PDS to the Applicant Requesting Additional Info; -May 27, 2021 Letter from PDS to Applicant with deadline for Additional Info; -July 21, 2021 Letter from PDS Denying Special Use Permit Application
Exhibit #29	Applicant's Appeal of Planning & Development Services Denial of Special Use Permit
Exhibit #30	Hearing Examiner's Order Granting Appeal & Reversing County's Denial
Exhibit #31	Geologic Hazard Site Assessment (Received August 12, 2022)

NEW EXHIBITS (EXHIBITS ADMITTED INTO THE RECORD AT 6/28/2023 HEARING ON REMAND):	
Exhibit #32	Evergreen Island's Letter Dated: 11/18/2022 + Stratum Group Review of Geologic Hazard Site Assessment (Dated November 15, 2022)
Exhibit #33	Third-Party Review of Geologic Hazard Site Assessment & Response to Evergreen Island's Letter dated 11/18/2022 (Received January 19, 2023)
Exhibit #34	Evergreen Island Email & Letter Regarding Watershed Company Response to Evergreen Island's Communication of 11/18/2022 + Stratum Group Letter
Exhibit #35	Revised Third-Party Review of Geologic Hazard Site Assessment & Response to Evergreen Island's Letter dated 11/18/2022 (Received March 31, 2023)
Exhibit #36	Notice of Public Hearing (Published on 6/8/2023), Neighbor Labels, & Parties of Record
Exhibit #37	Skagit County GIS Map of Subject Parcels & 300-Foot Buffer
Exhibit #38	Addendum to Staff Report, dated June 28, 2023
Exhibit #39	Memorandum to Hearing Examiner, dated June 28, 2023
Exhibit #40	Third Round of Public Comments, various dates
Exhibit #41	Staff Hearing Presentation, presented June 28, 2023
Exhibit #42	Presentation of Tom Glade, presented June 28, 2023

On July 13, 2023, Skagit County Planning and Development Services Department received a **decision from the Hearing Examiner (See Exhibit #43), approving the subject application for a Special Use Permit application with an additional five conditions of approval as was suggested by staff**. This decision was posted on the county's website and mailed/emailed to all parties of records.

A Notice of Decision (**See Exhibit #44**) was issued and published in the Skagit Valley Herald on July 20, 2023, posted onsite, and emailed/mailed to parties of record. The appeal period ended on July 27, 2023.

During the appeal period, Skagit County's Planning and Development Services Department received two (2) timely appeals (**See Exhibit #45**) of the Hearing Examiner's approval/decision. The first appeal received was from Evergreen Islands (**PL23-0363**) while the second appeal received was from Sunset Lane Association (**PL23-0380**).

On September 29, 2023, the Board of County Commissioners (BOCC) conducted a Closed-Record Public Hearing regarding the two (2) appeals received. Following public testimony and deliberation on the matter, on October 6, 2023, the Board of County Commissioners issued a **remand order (Resolution # R20230197) to the Hearing Examiner** (**See Exhibit #46**). The BOCC remand to the Skagit County Hearing Examiner was the for preparation of a GHSA 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/northwest 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.

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

On October 6, 2023, the **Hearing Examiner** after considering of the above directions, determined that the appropriate course now is to refer this matter to Planning and Development Services (PDS), with instructions to direct the applicant to have another Geologically Hazardous Site Assessment be prepared and submitted to PDS, in accordance with the Board of County Commissioners' October 6 instructions (**See Exhibit #47**).

On October 10, 2024, Planning and Development Services Department wrote, emailed, and mailed a letter via USPS to the applicant requiring a Geologically Hazardous Site Assessment be prepared and submitted to PDS, in accordance with the Hearing Examiner/Board of County Commissioners' October 6 instructions (**See Exhibit #48**). The applicant had 120-days to provide this information to Skagit County PDS per SCC 14.16.105(1).

On January 4, 2024, the applicant submitted to Skagit County PDS a request for additional time to submit the requested items to Skagit County. A ninety (90) day extension **(See Exhibit #49)** to this 120-day deadline was granted on January 4, 2024. The requested additional items requested by the Hearing Examiner/Board of County Commissioners were now due by 4:30 PM on May 10, 2024, instead of February 10, 2024.

On February 29, 2024, the applicant submitted the requested Geohazard Site Assessment (GHSA) prepared by Northwest Groundwater Consultants (**See Exhibit #50**) to Skagit County's Planning and Development Services as had been requested. The new GHSA included a physical investigation and analysis performed assessing the north/northwest groundwater flow and potential impacts under different mine development scenarios as was requested by the Hearing Examiner and Board of County Commissioners.

Following a review of the submitted GHSA, Skagit County Planning and Development Services Department forwarded this report to the department's third-party review consultant- Facet (DCG/Watershed Company) for peer review. The DCG/Watershed Company recently merged with Facet.

On April 1, 2024, Skagit County Planning and Development Services received a peer review/third-party review by Facet **(See Exhibit #51)** of the Lake Erie Pit Groundwater Evaluation that was done by Northwest Groundwater Consultants, LLC. According to the peer review report performed by Facet, Facet did not have any suggested revisions or modifications to the Northwest Groundwater Consultant's Geohazard Site Assessment (GHSA) report that assessed/evaluated the north/northwest groundwater flow and potential impacts under different mine development scenarios. Furthermore, Facet believes that the Northwest

Groundwater Consultant's report meets the requirement for assessment of potential impacts on bluff retreat rates and slope stability required under SCC 14.24.420 and the Board of County Commissioners and Hearing Examiner remands.

Following this most recent third-party review, another Notice of Public Hearing (**See Exhibit #52**) was published in the Skagit Valley Herald on April 18, 2024, posted onsite, and mailed to neighboring landowners located within 300-feet of the subject parcels as is required by Skagit County Code. Additionally, the notice of record was both emailed/mailed to all parties of record.

MAY 08, 2024, HEARING ON REMAND: ADDITIONAL STAFF SUGGESTED CONDITIONS OF APPROVAL:

In addition to the suggested conditions of approval that can be found in the Staff Report/Findings of Fact dated August 26, 2020 (**See Exhibit #1**), and in the 1st Addendum to the staff report (**Exhibit #38**), staff suggests the following condition(s) of approval after a review of the Geohazard Site Assessment (GHSA) prepared by Northwest Groundwater Consultant and Third-Party Review performed by Facet (DCG/Watershed Company) as follows:

1. The current 50-foot buffer width shall be increased to 100-feet along the western boundary of parcels P19108, P19162, P19155, and P19158. No development, grading, cut, and/or fill shall be allowed within this 100-foot buffer as is measured from the western property lines. The applicant shall revise their most current site plan to depict this 100-buffer width/area.

NEW EXHIBITS SUGGESTED BY PDS STAFF AT THE 5/8/24 HEARING ON REMAND:	
Exhibit #43	Hearing Examiner's Approval of Special Use Permit, PL16-0556 on Remand, dated: July 13, 2023
Exhibit #44	Notice of Decision
Exhibit #45	2 Appeals Received: Evergreen Island, PL23-0363 & Sunset Lane Association, PL23-0380
Exhibit #46	BOCC Remand Order, Resolution #R20230197, Dated October 6, 2023
Exhibit #47	Hearing Examiner Remand Order to PDS, Dated: October 6, 2023
Exhibit #48	Skagit County PDS Letter to Applicant, Dated: October 10, 2023
Exhibit #49	90-Day Extension of Time to Submit Additional Information Requested, Dated: January 4, 2024
Exhibit #50	Northwest Groundwater Consultants, Geohazard Site Assessment, Dated: February 29, 2024
Exhibit #51	Facet Peer Review/Third-Party Review, Dated: April 1, 2024
Exhibit #52	Notice of Public Hearing
Exhibit #53	2nd Addendum to Staff Report, Dated: May 8, 2024
Exhibit #54	Evergreen Island Response to HGC & Facet, Dated: April 19, 2024
Exhibit #55	Loring Advising/Evergreen Island's, Remand Requests Unaddressed Letter, Dated: June 23, 2023

MAY 8, 2024, OPEN-RECORD PUBLIC HEARING ON REMAND:

The most current Geologic Hazard Site Assessment (GHSA) prepared by Northwest Groundwater Consultant's is now complete, which addresses the BOCC and Hearing Examiner's order/direction that include an additional physical investigation and analysis be performed to assess the north/northwest groundwater flow and potential impacts under different mine development scenarios,

Additionally, peer review/Third-Party review of Northwest Groundwater Consultant's GHSA has occurred with **no revisions and/or modifications suggested**. This matter will now go back to the Hearing Examiner for review, public testimony, deliberation, and consideration. **The purpose of the hearing is only to review the remanded item(s) required by the Hearing Examiner per his October 6, 2023, remand order to Skagit County's Planning and Development Services Department for Special Use Permit Application, PL16-0556**.

STAFF RECOMMENDATION:

Based on a review of the application material submitted, special use permit criteria of approval, SEPA environmental checklist, environmental studies, two (2) Third-Party reviews, an issued SEPA Mitigated Determination of Non-Significance (MDNS), and the Findings of Fact/Staff Report (and Addendums thereto), staff recommends to the Hearing Examiner that the subject Special Use Permit application be approved subject to conformance with staff's suggested conditions of approval (**as is listed in the Exhibit #1, Exhibit #38 and Exhibit #53)**.

If you have any questions, please let me know. I can be reached by phone at (360) 416-1423 or via email at kcricchio@co.skagit.wa.us. Thank you.

Kevin Cricchio

Kevin Cricchio, AICP, ISA,
Senior Planner
Skagit County
Planning & Development Services

EXHIBIT #24

HEARING EXAMINER'S APPROVAL OF SPECIAL USE PERMIT, PL16-0556

NOTICE OF DECISION

BEFORE THE SKAGIT COUNTY HEARING EXAMINER

Applicant:	Bill Wooding Lake Erie Pit LLC 13540 Rosario Road Anacortes, WA 98221
Agent:	Stephen Taylor McLucas & Associates, Inc. P. O. Box 53352 Lacey, WA 98509
Request:	Special Use Permit, PL16-0556
Location:	South of the intersection of Rosario Road and Marine Drive, within a portion of NW1/4 Sec. 11, T34N, R1E, W.M.
Land Use Designation:	Rural Resource-Natural Resource Lands (RRc-NRL) – Mineral Resource Overlay
Summary of Proposal:	To expand an existing gravel mine from 17.78 acres to about 53.5 acres, allowing removal of approximately 60,000 tons of gravel per year for approximately 60 years.
Public Hearing:	Commenced August 26, 2020, and continued on October 14, 2020, via telephone and GoToMeeting. Testimony by Planning and Development Services Staff, Applicant's agent, and Applicant. Testimony by 12 members of the public at first hearing, and by 34 members of the public at continued hearing.
Decision/Date:	The application is approved, subject to conditions. November 30, 2020
Reconsideration/Appeal:	Reconsideration may be requested by filing with Planning and Development Services (PDS) within 10 days of this decision, Appeal is the Board of County Commissioners by filing with PDS within 14 days of this decision, or decision on reconsideration if applicable.
Online Text:	The entire decision can be viewed at: www.skagitcounty.net/hearingexaminer

PROCEDURE

1. The site is zoned Rural Resource-Natural Resource Lands and is within a designated Mineral Resource Overlay (MRO). The MRO was enlarged in 2016 at the applicant's instigation to include the increased acreage he now seeks to mine.

2. The subject application for a Mining Special Use Permit was filed on December 2, 2016, after approval of the expanded Mineral Resource Overlay (MRO).

3. An Environmental Checklist under the State Environmental Policy Act accompanied the Comprehensive Plan amendment that increased the size of the MRO. This checklist was updated on June 6, 2017, to accompany the request for a Special Use Permit.

4. A Mitigated Determination of Non-Significance (MDNS) was entered on January 4, 2019. The MDNS was not appealed.

5. The public hearing was held telephonically and by GoToMeeting. It was initially convened on August 26, 2020. The Examiner then heard testimony from Staff, the Applicant's consultant, the Applicant and 12 members of the public. The Examiner continued the hearing to October 14, 2020, on motion of Evergreen Islands to insure that public notice was properly given.

6. The public hearing concluded on October 14, 2020. The Staff, Applicant's consultant and Applicant testified again. Then 34 members of the public were heard. The public testimony was overwhelmingly against granting the permit. A number of speakers urged doing more study before reaching a decision.

7. The Examiner held the record open through October 16, 2020, to allow for responses to the oral testimony given at the hearing.

FINDINGS OF FACT

The Setting

1. Bill Wooding, for Lake Erie Pit LLC, seeks to expand operation of an existing gravel mine from 17.78 acres to approximately 53.5 acres. The proposed expansion of mining would all occur within a recently enlarged Mineral Resource Overlay (MRO).

2. The site has been mined for sand and gravel since at least the 1960's

3. The pit is south of the intersection of Rosario Road and Marine Drive in the southwestern part of Fidalgo Island. It is legally described as within a portion of NW1/4 Sec. 11, T34N, R1E, W.M. To the north is Mount Erie and the city of Anacortes. To the east is Campbell Lake. To the south is Deception Pass. To the west is the salt water of Burrows Bay.

4. In the immediate neighborhood, Lake Erie is across the road to the northeast. Devil's Elbow Lake, part of a large wetland area, is to the southeast over a rise and at a higher elevation than the present pit.

5. A substantial ridge on the west side of the mine property forms a steep bank separating the pit, physically and visually, from Rosario Road as it runs north-south. Across the road from this bank, the topography slopes downward to Burrows Bay.

6. Along Rosario Road and downhill toward the shore are residences. To the southwest is the Sunset Lane residential area. The two closest residences are 200 feet from the western portion of the existing and proposed mining operation. Residences are located within a quarter mile west, north, south and east of the project site.

7. Adjacent zoning is predominantly Rural Intermediate, and Rural Reserve.

8. The larger vicinity encompasses Campbell Lake, Mount Erie, and Deception Pass and includes a number of parks and recreation areas. The area is a major attraction for tourists.

The Proposal

9. The permit request is for permission to mine up to approximately 60,000 tons of gravel per year for approximately 60 years -- a total of approximately 3,600,000 tons (2,250,000 cubic yards). The proposal would extend mining over an area that is now almost completely forested.

10. The proposed mining will take the floor of the site from a 375-foot elevation down to a 250-foot mine base. Mining will stop at about 50 feet above the regional water table which at this location is at an elevation of approximately 200 feet. The mining plan has four phases.

11. The initial phase of the operation will involve removing timber from the mining areas. Once timber is removed, topsoil will be stripped off and stockpiled for eventual use in site reclamation.

12. Northeast from the mine Lake Erie is about 1000 feet down gradient. Within the northerly section of mining site, all surface runoff is to be captured in an armored trench from which it will be conveyed to a catch basin.

13. The mining plan is to remove gravel from the site in a counter-clockwise progression to the southwest, south and east of the present pit.

14. Mining operations will be conducted with an excavator and front end loader. Sand and gravel will be screened periodically using a power screen. It is proposed to crush large rocks using a portable crusher brought into the site once or twice a year (spring and fall).

15. The proposal calls for a 100-foot setback from property lines for all excavation and a 200-foot setback for all processing (screening/crushing).

16. Under the proposal, gravel will be loaded into trucks onsite and hauled out via a single exit which is to the north of the present pit. To handle peak requirements, the production sought will require 13 truckloads or 26 trips per day.

17. The applicant has advised that up to three employees will be working onsite during maximum operation. No offices or buildings are proposed. Water for workers will be brought in. Portable sanitation facilities will be used. Employee parking will occur offsite to the north at Lake Erie Trucking, which is also owned and operated by the applicant, Bill Wooding.

18. Fueling, truck maintenance, and storage of oil, lubricants and chemicals will not occur on site. Such operations will be carried out across the road at Lake Erie Trucking.

19. Proposed hours of operation are Monday through Friday from 8 a.m. to 5 p.m., and Saturdays from 8 a.m. to noon.

20. Changes in visual aesthetics will be minimized to the west by the existing perimeter berm and by the construction of new berms. Mining operations will continue to be visible from the north and this visibility will increase with clearing and expanded mining.

21. One purpose of the present application is to get a comprehensive reclamation plan into effect. When mining is finished, the plan is to bring in clean fill to raise the ground level to 300 feet and then to plant native grasses and other plants. The filling process will occur progressively, after each phase of mining is completed. The reclamation activities will be overseen by the State Department of Natural Resources.

Environmental Review

22. A Mitigated Determination of Non-Significance (MDNS) was issued on January 4, 2019, accompanied by an 18-page narrative entitled "SEPA Environmental Review Staff Report." The narrative reviewed impacts and mitigations for various elements of the environment. A paraphrased summary follows:

Earth -- *potential impact*: Destabilizing of slopes and increased erosion.
-- *analysis/mitigation*: Due to permeability of geologic formation, no significant erosion anticipated. Potential for shallow surficial landslides offset by 100 foot setback from the property line to provide a buffer to prevent failures from encroaching on neighboring property.

Air – *potential impact:* Excavation/transport equipment will generate dust
--*analysis/mitigation:* Dust controlled through best management practices control plan which includes spraying water on road and equipment. Dust shall not exceed Northwest Clean Air Agency, state and federal regulations.

Water – *potential impact:* Increased surface water runoff and impacts to ground water. Potential effects on perched and unconfined aquifers; draining of surface waters and wetlands.
analysis/mitigation: All surface water runoff from mining operations will be directed into the interior of the mine, collected in a detention pond and infiltrated on site. High infiltration rates minimize risk of runoff leaving site. Based on Hydrogeologic Report, mining activities will not adversely affect groundwater quality or quantity or result in draining surface water resources adjacent to the mine.

Plants and Animals – *potential impact:* Encroachment on wildlife habitat, wetlands
analysis/mitigation: No critical areas identified onsite, nearest wetland buffer does not extend onto mine site.

Energy/Health – *potential impact:* Use of petroleum fuels/possible spills
analysis/mitigation: Fueling and equipment maintenance done off site on impermeable surfaces. No toxic materials stored on site

Noise – *potential impact:* Operations may produce noise in excess of Washington State residential noise standards.
analysis/mitigation: Noise generated by mining operations will be muffled by topography except to the north. Noise control mitigation measures consistent with noise study shall be implemented, including:

- 100 foot mining setback from Rosario Road and all property lines.
- No mining on parcel P19108 (the most northerly parcel which borders the road.)
- Prior to mining on parcels P19158 and P90028 construct a 14 foot high earthen berm or equivalent to shield excavation equipment on western side of parcel.
- Prior to mining on parcel P19161 construct a 16 foot high earthen berm or equivalent to shield excavation equipment on north and east sides of parcel.
- Prior to mining on parcel P19164 construct a 12 foot high earthen berm or equivalent to shield excavation equipment on the north and east sides of the site.
- Rock crushing and screening operations are limited to the processing area indicated on the site plan.

The effect of these measures is anticipated to be compliance with state and county noise regulations.

Land & Shoreline Use – *potential impact:* Effects on nearby residential use of noise, traffic and dust associated with gravel mining. *analysis/mitigation:* Proposed mine expansion is 850 feet from nearest shore and 200 feet from nearest housing. Noise, emissions, dust generation and traffic are not anticipated to be exceed standards if mitigation measures are implemented.

Aesthetics/Light and Glare – *potential impact:* Changes in appearance from removing trees, creating more exposed mining area; effects of truck headlights. *analysis/mitigation:* Topography will minimize aesthetic impacts; berms will control some light and glare; reclamation will restore vegetation.

Recreation – *potential impact:* Staff finds no known recreational opportunities on or in the immediate vicinity of the proposed mine expansion, other than occasional target shooting in the pit. This reportedly only occurs with the permission of the mine owner and is not available to the general public No recreational shooting will occur during mining operations.

Historic and Cultural Preservation – *potential impact:* None known, *analysis:* Staff recommends a condition regarding action to take if cultural materials are discovered during operation of the mine.

Transportation – *potential impact:* Expanded gravel mining will increase truck and trailer traffic, generating an average of 13 outgoing loads per day or 3, 380 truck trips per year. Eight new truck trips are anticipated during peak hour traffic. Hours of operating are to be Monday-Friday: 8 am to 5 pm, Saturday: 8 am to 12 pm. Rosario Road, Marine Drive and Havekost Road will be used during mining operations. *Analysis/mitigation:* Upon review of professional traffic study and the County's existing regulations, Staff concluded that there will be no adverse impacts from traffic created by the mining expansion. *Analysis/mitigation:* Site distance to the west of the access road should be made to meet AASHTO guidelines and the existing site access should be upgraded by placement of an asphalt apron with rumble strips to prevent tracking of mud and debris off site.

Utilities and Public Services – *potential impact:* None

` 23. The MDNS contained the following conditions:

(1) The public right-of-way shall be kept clean. Tracking of mud and debris off site shall not be allowed. An asphalt apron, with rumble strips, shall be constructed from the asphalt edge of Rosario Road 100 feet into the property on the existing/proposed gravel mine access road to prevent tracking mud and debris off site.

(2) The applicant shall comply with Northwest Clean Air Agency (NWCAA) requirements, including all dust control requirements both on and offsite. Visible dust generation shall require immediate best management plan (BMP) implementation as described in the Lake Erie Pit air quality best management practices recommendations by Maul Foster Alongi dated September 15, 2016.

(3) Temporary erosion/sedimentation control measures, as approved by the Skagit County Planning and Development Services, shall be in place prior to the initiation and maintained for the duration of the project pursuant to Skagit County Code (SCC) 14.32, Stormwater Management Ordinance.

(4) The project shall comply with noise, vibration, and light/glare limitations as per SCC 14.16.840. Noise control mitigation measures, consistent with the noise study, shall include:

a. Maintain a 100 foot mining setback from Rosario Road and all property lines,
b. No mining shall occur on parcel P19108.
c. Prior to mining on parcels P19158 and P90028, a 14 foot high earthen berm or equivalent noise barrier shall be constructed to shield the excavation equipment on the western side of the parcel.
d. Prior to mining on parcel P19161, a 16 foot high earthen berm or equivalent noise barrier shall be construct to shield the excavation equipment on the northern and eastern side of the parcel.
e. Prior to mining on parcel P19164, a 12 foot high earthen berm or equivalent noise barrier shall be constructed to shield the excavation equipment on the northern and eastern side of the site.
f. Rock crushing and screening operations are limited to the processing area as indicated on the site plan.

(5) The project is limited to those activities described in the SEPA checklist and supporting documents. Significant deviation from the proposal may require additional review and approval by Skagit County Planning and Development Services.

(6) The site distance to the west of the access road to the mine does not meet AASHTO guidelines for intersection sight distance. The applicant shall clear parcel P19108 of brush, trees and perform site grading as necessary to increase the site distance to Marine Drive.

(7) The applicant shall comply with the provisions of Washington State Administrative Code (WAC) 173-200 & 173-201A as required to prevent surface water quality and groundwater impacts. Best management practices shall be utilized to prevent interference and/or degradation of water quality.

(8) Gravel mining operations shall not extend to a depth closer than 10 feet above the seasonal high groundwater as established by the Hydrogeologic Site Assessment report by Maul Foster Alongi, dated September 28, 2016.

(9) All soil imported for reclamation of the parcel must be certified as "clean soils," as defined by WAC 173-350-100, by a consulting environmental geologist and independent testing laboratory. Written certification of the clean soils for each source of soil shall be provided to Skagit County Planning and Development Services and the Skagit County Health Department prior to transportation and placement of soil material onsite. The certification shall indicate the source of the soil tested, locations of the samples obtained, laboratory test results for each source of soil, and the soil sampling data forms.

(10) All fill soil imported to the site for the purpose of raising the mine base floor elevation to 300 feet mean sea level shall be placed in lifts not to exceed 8 inches in depth and compacted to 95% of ASTM D-1557 modified proctor. Soils compaction test reports from a licensed geotechnical engineer verifying compaction shall be provided to the Skagit County PDS annually. The report shall indicate the source of the soil tested, locations of the compaction tests onsite, depth of fill at time of testing, proctor test results for each source of soil, and the soil compaction test data form.

(11) A class IV general forest practice permit shall be obtained from the Washington Department of Natural Resources prior to harvest of any timber onsite.

(12) A Construction Stormwater General or Industrial Permit may be required by the Department of Ecology (WSDOE) for this project. Contact the WSDOE Bellingham Field Office to determine if a permit is required.

(13) Should any human remains, archaeological, historic or cultural materials be discovered during construction, work in the affected area shall cease immediately and the area shall be secured. Within 24 hours of the discovery, or as soon thereafter as possible, the developer shall notify the Skagit County Sheriff's office, Skagit County Planning and Development Services, the Washington State Department of Archeology and Historic Preservation and affected tribes. If following consultation with the above parties it is determined that an archaeological and cultural resource assessment is required, the project developer shall retain the services of a professional archaeologist to prepare such an assessment. Project work in the affected area shall only continue when in

conformance with applicable state and federal laws.

24. The MDNS was not appealed.

Discussion

25. The Mineral Resource Overlay (MRO) was enlarged in 2016 to encompass the area of mining contemplated by the subject permit application.

26. The application describes the Lake Erie Pit as currently being in operation, producing 20-30,000 tons of sand and gravel per year. At the hearing, numerous persons testified that no operations have been observed at the pit for several years.

27. The preponderance of evidence is that the mining operation has been essentially moribund in recent times. Over the years of the mine's existence, residential development of the surrounding area has increased. The neighborhood context today has changed from when mining at the site began. This probably accounts for the significant outpouring of opposition to this application.

28. Be this as it may, the question of the appropriate use of the site has been legislatively resolved by the approval of an enlarged Mineral Resources Overlay (MRO) which encompasses the area of the applicant's mining proposal. Under SCC 14.16.400(1) the purpose of the overlay is to

> maintain and enhance natural resource-based industries by . . . allowing continued operation of existing legally established uses, and by assuring that use of adjacent lands does not interfere with the extraction and quarrying of minerals.

29. The MRO code provisions explicitly provide for the expansion of pre-existing mining operations through the mechanism of a Mining Special Use Permit. SCC 14.16.400(3)(c).

30. The criteria for Mining Special Use permits are weighted towards approval. Under SCC 14.16.440(9), site-specific conditions are mandated to mitigate "incompatibilities between mineral extraction operations and adjacent parcels." The County Staff Report endeavors to fulfill this requirement through the recommendation of 15 conditions of approval.

31. Analysis provided by the applicant indicates surface and ground water flow toward Lake Erie is to the north and northeast of the site. Submissions from the public, including evaluation by professionals, call this into question. There is widespread concern that with more mining to the south some infiltrating water is likely to flow to the west and that slope and bank stability in that direction may be adversely affected. The Del Mar water line, Rosario Road and a number of homes lie to the west.

32. The Examiner finds that the preponderance of evidence supports the analysis of the applicant as to surface and groundwater flow. Three hydrogeologic analyses were completed by the applicant to evaluate groundwater conditions onsite. The Examiner finds that the preponderance of evidence supports the view that the flow (surface and ground) is to the northeast and away from Dodson Canyon and Sunset Lane.

33. Concern was also expressed at the hearing and in correspondence about the potential dewatering of wetlands in the vicinity. The applicant installed an observation well to assist evaluation of whether a perched aquifer exists between Devil's Elbow Lake and the mining area. The evaluation concluded that a perched aquifer is not present in the area. There appears to be no hydraulic connection between Devil's Elbow Lake and the units to be mined,

34. A professional traffic analysis commissioned by the applicant indicates that the added truck trips will not adversely affect the level of service or safety in the immediate vicinity. There appears to be no solid evidence that the relatively modest addition of truck traffic from the mine will cause congestion or measurably affect safety on the surrounding roads. The Washington State Department of Transportation did not comment on this proposal.

35. The County's Department of Public Works reviewed the applicant's traffic study and essentially concurred with its findings. A sight distance issue at the entrance was identified, but found to be curable by clearing and grading. The condition of roads in the area was found to be excellent and thus able withstand the anticipated truck traffic. Possible conflicts with school busses, pedestrian or bicycle use were not found significant.

36. A noise study prepared by professionals in acoustics analyzed noise from future noise sources around the site. The study determined that without noise control, future operations would exceed State standards at nearby residences. The study recommended seven control measures which are reflected in conditions of the MDNS. These consist of setbacks and a requirement for berms at various locations. It was estimated that the noise control measures would reduce residential noise levels to below 60 dbA, which is the regulatory limit here.

37. Modernly, the character, landscape and lifestyle of this rural area is that which supports the scenic and recreational uses nearby. The local outcry about this project is essentially the expression of an opinion that the expansion of this mine conflicts with the character of the area. However, the adoption of the MRO around the mining site appears to foreclose this argument as a legal matter.

38. The applicant's testimony was that he has no immediate plans for significantly expanding the operation of the mine. He is elderly and said that the current application represents part of an attempt to get his affairs in order. He has no plans to sell the property.

39. Any finding herein which may be deemed a conclusion is hereby adopted as such.

CONCLUSIONS OF LAW

1. The Hearing Examiner has jurisdiction over this proceeding. SCC 14.16.440(9).

2. The provisions of Chapter 43.21C RCW, the State Environmental Policy Act (SEPA), have been met. The time to appeal the MDNS has long-since passed. Therefore, the preparation of an Environmental Impact Statement cannot not now be required.

3. Nonetheless, the Examiner concludes that likely environmental consequences of the proposal have been adequately evaluated.

4. The question of issuance of a Mining Special Use Permit was essentially decided by inclusion of the site within a Mineral Resources Overlay (MRO). See SCC 14.16.440. Under these code provisions a permit is to be issued "if the impacts are mitigatable." SCC 14.16.440(9).

5. Mitigation is not a legally defined term in this context. It must therefore be taken to carry its ordinary meaning. Mitigation does not mean the elimination of all impacts. Rather it means the moderation or reduction of impacts.

6. The Examiner concludes that the conditions of approval imposed here are appropriate site-specific conditions which mitigate existing and potential incompatibilities between the mineral extraction operation and adjacent parcels. The conditions imposed are reasonable, practicable and generally capable of being achieved by the mine operator.

7. In sum, the requirements for approval of a Mining Special Use Permit have been met.

8. The proposal is also consistent with the general Special Use Permit requirements of SCC 14.16.900(1)(b)(v). In particular, the activities, as conditioned, will not unduly intrude on residential uses; cause adverse effects on public health, safety and welfare; nor interfere with the character, landscape and lifestyle of the particular rural area.

9. Were the pit not already in existence, this would be a different case. The application is essentially concerned with the continuation of a long-time pre-existing use. The character of the particular rural area already includes this mine.

10. However, it is vital to the success of this undertaking, that the permittee closely follow the conditions that have been imposed. Therefore the Examiner has added a provision for review of this approval at five year intervals.

11. Any conclusion herein which may be deemed a finding is hereby adopted as such.

CONDITIONS

1. The development and operation of the gravel mine shall be as described in the application materials, the SEPA checklist, and supporting documents, except as the same may be modified by these conditions.

2. A Department of Natural Resources (DNR) Surface Mine Reclamation Permit shall be applied for and obtained prior to mining as per Chapter 78.44 RCW. No mining may take place prior to obtaining a reclamation permit from DNR.

3. The applicant shall obtain all other required permits and shall abide by the conditions of same.

4. The applicant shall comply with all conditions set forth in the Mitigated Determination of Non-Significance (MDNS) entered on December 3, 2018 (See Finding 23 above).

5. Significant deviation from the proposal will require additional review and approval by Skagit County Planning and Development Services (PDS).

6. The operation of the mine shall be limited to daylight hours only.

7. Rock crushing shall be limited to twice a year in the spring and fall. Any such operations shall be limited to daylight hours and no more than a month in duration.

8. In the event that cut slopes from the mining operation exceed 50%, the top of the slope shall be fenced or otherwise marked to prevent access.

9. PDS shall be notified within 30 days of any change in ownership of the affected parcels by submitting a letter to the Planning Director referencing the permit number (PL16-0556).

10. The proposal shall be commenced within two year of the permit approval per SCC 14.16.900(d).

11. This permit shall be void if the use is abandoned for more than a year.

12. Activities under this permit shall be reviewed by the County every five years, commencing with 2025. Prior to this review, the permittee shall submit a report to PDS detailing operations during the previous five-year period. If any failures to comply with these conditions or other problems are noted, the County shall take such action as is appropriate.

13. Failure to comply with any permit condition may result in permit revocation. SCC14.16.900(1)(b)(iii).

ORDER

The requested Special Use Permit (PL16-0556) is approved, subject to the conditions set forth above.

SO ORDERED, this 30th day of November, 2020.

Wick Dufford

Wick Dufford, Hearing Examiner

Transmitted to Applicant, County staff, interested parties, November 30, 2020.

EXHIBIT #25

APPELLANT'S APPEAL OF HEARING EXAMINER DECISION

Appeal or Request for Reconsideration

Planning & Development Services · 1800 Continental Place · Mount Vernon WA 98273
voice 360-416-1320 · inspections 360-416-1330 · www.skagitcounty.net/planning

File #:
Received by:

Appeal

What are you appealing?

- ☐ Appeal of an Administrative Interpretation/Decision/Action to the Hearing Examiner
- ☐ Appeal of an Administrative Order to Abate (code enforcement order) to the Hearing Examiner
- ☐ Appeal of Impact Fees to the Hearing Examiner (impact fees must be paid) (SCC 14.30.070)
- ☑ Appeal of Hearing Examiner Decision/Action to the Board of County Commissioners
- ☐ Request for Reconsideration of a Hearing Examiner Decision (SCC 14.06.180)

File # of Appealed Decision or Permit	PL16-0556	**Appeal Fee**	$	*PDS will calculate*
Date of Appealed Decision or Permit	November 30, 2020	**Publication Fee**	$	*PDS will calculate*

PDS staff: do not accept appeal form without full payment of fees

Appellant

Standing to appeal	☐ Permit applicant ☐ Party of Record ☐ Party subject to code enforcement order ☐ Other				
Name	Evergreen Islands				
Address	PO Box 223				
City, State	Anacortes, WA	**Zip**	98221	**Phone**	415-244-9582
Email	marlenefinley17@gmail.com	**Signature**	Marlene Finley		

Attorney or Representative

☐ None

Name	Kyle Loring				
Address	PO BOX 3356				
City, State	Friday Harbor, WA	**Zip**	98250	**Phone**	360-622-8060
Email	kyle@loringadvising.com				

Attachments

☑ For any of the **appeals** listed above, please attach a concise statement with numbered responses to the following questions.

1. What is your interest in this decision?
2. How are you aggrieved by the decision you are appealing?
3. What are the specific reasons you believe the decision is wrong?
   e.g. erroneous procedures, error in law, error in judgment, discovery of new evidence
4. Describe any new evidence.
5. List relevant sections of Skagit County Code.
6. Describe your desired outcome or changes to the decision.

☐ For a request for **reconsideration** of a Hearing Examiner decision, attach a statement identifying the specific errors alleged.

BEFORE THE BOARD OF COUNTY COMMISSIONERS

IN AND FOR THE COUNTY OF SKAGIT, WASHINGTON

In the Matter of the Appeal of Special Use Permit, PL16-0556, for the expansion of a gravel mine for 60 years.	NO. PL16-0556 **NOTICE OF APPEAL**

INTRODUCTION AND DECISION BEING APPEALED

Appellant Evergreen Islands respectfully files this Notice of Appeal pursuant to SCC 14.06.120(9) to ask that the Skagit County Board of Commissioners ("Board") reverse the Skagit County Hearing Examiner's ("Hearing Examiner") November 30, 2020 decision ("Decision") to approve Special Use Permit PL16-0556 ("Permit"). The Permit expands a 17.78-acre gravel mine to 53.5 acres and extends its operations to permit the excavation of approximately 60,000 tons of gravel over a full 60 years. The Decision is clearly erroneous because the Permit issued without acknowledgement of an unstable slope abutting the mining property or an analysis of the mine's potential to destabilize that bluff through its deforestation, excavation, and associated increase in groundwater runoff. Because a landslide would cause significant safety risks to the adjacent neighborhood and to traffic on Rosario Road, it must be evaluated properly and, if necessary, addressed, before the mining proposal can be permitted. A copy of the Decision is attached hereto as Attachment A.

I. NAME, ADDRESS, AND INTEREST OF APPELLANT.

1.1. Evergreen Islands ("Evergreen") can be reached as follows:

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

Evergreen Islands
PO Box 223
Anacortes, WA 98221
415-244-9582
Marlenefinley17@gmail.com

1.2. Evergreen is represented in this appeal by Kyle Loring, who can be reached as follows:

Kyle Loring
Loring Advising PLLC
PO Box 3356
Friday Harbor, WA 98250
360-622-8060
kyle@loringadvising.com

1.3. Evergreen Islands has an interest as a party of record in this matter because organizational representatives and members provided written and oral testimony to the Hearing Examiner prior to the Decision. The Skagit County Code ("Code") defines a "party of record" as "any person who has testified at a hearing or has submitted a written statement related to a development action and who provides the County with a complete address, or a person who has formally requested to receive information via a written statement with a complete mailing address." SCC 14.04.020. Consequently, because Evergreen testified at the hearing and submitted a written statement related to the mine application, it has standing to appeal the Decision pursuant to SCC 14.06.170(2).

1.4. In addition, Evergreen Islands has an interest in environmental conservation and in safeguarding local communities from unnecessary and unexamined risks of development proposals. Evergreen Islands is a public interest, membership organization that works to conserve natural resources and protect communities in and around Skagit County and the Salish Sea. Evergreen is based in Anacortes. Evergreen's mission is to promote, protect, and defend the unique ecosystems involving the saltwater islands of Skagit County and their environs as they relate to the built and natural environments. Since incorporation in 1977, Evergreen has focused on monitoring and supporting the responsible enforcement of local, state, and national

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

laws that protect the environment. Evergreen Islands board members and members participated in the proceedings before the Hearing Examiner by testifying at the hearing and submitting written comments about the mine.

II. HOW APPELLANT IS AGGRIEVED

2.1. Evergreen and its members would be aggrieved by the Permit's unexamined community impacts and by the environmental impacts associated with the substantially expanded mine. Evergreen members would be aggrieved by the increased risk of geological instability that the mine would cause for Rosario Road, a popular and well-traveled route between Anacortes and Deception Pass State Park and Whidbey Island. Evergreen members may also be aggrieved by insufficiently examined groundwater impacts from the mine. And Evergreen members would be aggrieved by the increased traffic from adding twenty-six (26) one-way gravel truck trips each day on local rural roads like Rosario Road and Campbell Lake Road, as well as by the unexamined increase in the risk of collision when those trucks enter or exit State Route 20 from Rosario Road and Campbell Lake Road.

III. SPECIFIC REASONS WHY THE DECISION IS WRONG

3.1. The Decision is clearly erroneous because it approved a Mining Special Use Permit without statutorily-required information for that Permit. This section should be read in conjunction with Section IV. below, which references applicable sections of the Skagit County Code and identifies the application's inconsistencies with those sections. The Hearing Examiner erred by approving a permit without inquiry into impacts to a documented unstable slope directly adjacent to the mine, without an adequate hydrogeological analysis of potential groundwater impacts from the deforestation and rock excavation, and without information about traffic impacts at major intersections between Route 20 and Campbell Lake Road and Route 20 and Rosario Road.

3.2. The Hearing Examiner erred in approving a permit for a mine directly adjacent

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

to a documented unstable slope in the absence of an evaluation of potential impacts to that slope. Like the project application, the Decision overlooked the existence of unstable slopes directly adjacent to the project site, notwithstanding a geologist report identifying concerns about the lack of analysis of mine impacts on those slopes. Skagit County's Critical Areas Ordinance requires such an analysis, and a Licensed Geologist at Stratum Group confirmed the need for that analysis in a written comment letter to the Hearing Examiner and in oral testimony at the hearing. The geologist conducted several geology hazard assessments on the bluffs west of the proposed mine, including field inspections that involved observations of exposed geologic units, hand dug test pits to determine underlying soils and geology units, review of available geologic mapping, lidar imagery, and historical aerial photographs and maps. Based on his geology hazard assessments, perched groundwater flowing out of springs and seeps in the hillside has a significant impact on slope stability directly west of the mine and any change in groundwater at the mine would have the potential to alter that groundwater flow and significantly impact the stability of the bluffs. An increase in bluff failure frequency and scale would significantly impact homes near the bluff, roads and infrastructure between the mine and bluff, and shoreline processes along the beach below it. Yet, the SEPA Checklist and hydrogeology reports in the application did not discuss or evaluate these impacts. Notwithstanding Washington Coastal Atlas maps showing unstable bluffs directly adjacent to the mine, the SEPA Checklist stated that there were no surface indications or history of unstable slopes in the immediate vicinity of the project.

3.3. The Hearing Examiner also erred in the following findings of fact related to site hydrogeology:

3.3.1. FOF No. 10 -- the water table at the site is at an elevation of approximately 200 feet. The application ignored the unstable bank to the west of the mine property that contains springs. A public comment by a purported hydrogeologist identified the elevation of a spring approximately 400 feet south of the pit boundary, in a

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

location called Dodson Canyon, at an elevation of 273 feet.

3.3.2. FOF No. 12 -- Lake Erie is about 1000 feet downgradient of the mine (FOF No. 12). To the extent that this finding comes from the applicant's groundwater documents, it relies on flawed information. The application's hydrogeological report was flawed for at least the following reasons: (a) it failed to acknowledge the springs that drain groundwater on the bluffs to the northwest and thus the likelihood that water flows from the site to the springs; (b) it failed to acknowledge that the non-uniform geology between reference wells precludes its conclusions about groundwater flow direction; (c) it failed to identify the different percolation rates that would apply to the denuded floor of the pit and the pre-mine vegetated state; and (d) it failed to use wells screened at the same vertical level to ensure uniformity in the measurement. In addition, as explained by the Stratum Group submission, the groundwater contour map failed to show any elevation control between the mine site and the springs in the unstable slope to the west, and groundwater incorrectly moving lateral to, rather than toward the springs.

3.3.3. FOF No. 22 -- due to permeability of geologic formation, no significant erosion is anticipated and that the potential for shallow surficial landslides would be offset by a 100-foot setback from the property line. To the extent that this finding relies on the applicant's groundwater documents, it relies on flawed information as detailed above at paragraph 3.3.2.

3.3.4. FOF No. 22 -- based on a hydrogeologic report, mining activities will not adversely affect groundwater quality or quantity or result in draining surface water resources adjacent to the mine site. To the extent that this finding relies on the applicant's groundwater documents, it relies on flawed information as detailed above at paragraph 3.3.2.

3.3.5. FOF No. 32 -- the preponderance of the evidence supports the applicant's position that surface and groundwater flow moves toward the northeast and away from

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

Dodson Canyon and Sunset Lane. To the extent that this finding relies on the applicant's groundwater documents, it relies on flawed information as detailed above at paragraph 3.3.2.

3.4. In addition, the Hearing Examiner made an erroneous finding of fact in stating that the project's added truck trips will not adversely affect the level of service or safety in the immediate vicinity, to the extent that immediate vicinity includes areas more than a few hundred feet from the driveway to the property (FOF No. 34). Although evidence was not presented at the hearing to demonstrate that the additional truck traffic turning onto and off of Route 20 at Campbell Lake Road and Rosario Road would create a hazard, the applicant bears the burden of demonstrating that the project will not cause such impacts, and the applicant's traffic analysis document did not evaluate impacts at those nearby intersections.

3.5. The Decision also includes the following erroneous conclusions of law ("COL"):

3.5.1. COL No. 3 -- likely environmental consequences of the proposal have been adequately evaluated. Environmental consequences of mining directly adjacent to an unstable slope and gravel trucks entering and exiting challenging Route 20 intersections were not explored at all, and as explained above, the mine's groundwater impacts were not adequately evaluated because the application did not acknowledge the groundwater flow toward the unstable slope to the west of the mine site.

3.5.2. COL No. 4 -- the question of issuance of a Mining Special Use Permit was essentially decided by inclusion of the site within a Mineral Resource Overlay. While the designation of a property as Mineral Resource Overlay land indicates an intent that such property be used for mining, applications must nonetheless meet Skagit County Code criteria and be conditioned to ensure that inappropriate impacts or elevated risk to public health and safety are addressed.

3.5.3. COL No. 5 -- mitigation does not mean the elimination of impacts but rather the moderation or reduction of impacts. The Skagit County Code does not support

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

this broad statement. Mitigation should apply in both kind and quantity as necessary to address impacts and reduce risks as much as possible.

3.5.4. COL No. 6 -- the conditions of approval will mitigate existing and potential incompatibilities between the mineral extraction operation and adjacent parcels. As set forth above, the Permit has not been conditioned to address potential impacts to the unstable bluff to the west or traffic impacts at State Route 20 impacts because the application did not acknowledge or evaluate those impacts.

3.5.5. COL No. 7 -- the requirements for approval of a Mining Special Use Permit have been met. Absent an evaluation of the unstable bluff or traffic impacts, the project has not met the requirements for a Mining Special Use Permit.

3.5.6. COL No. 8 -- the proposal is consistent with the general Special Use Permit requirements of SCC 14.16.900(1)(b)(v) on the grounds that the activities, as conditioned, will not unduly intrude on residential uses, cause adverse effects on public health, safety, and welfare, and will not interfere with the character, landscape, and lifestyle of the particular rural area. Absent an evaluation of the unstable bluff or traffic impacts, the project has not satisfied these criteria.

3.5.7. COL No. 9 -- the application is essentially concerned with the continuation of a long-time pre-existing use. While the mine has operated for some time, subject to periods of much less intense activity, the Permit approves a tripling of the size of the mine, more than just the continuation of an existing use.

IV. APPLICABLE SECTIONS OF SKAGIT COUNTY CODE

Applicable sections of the Skagit County Code and related errors in the Permit approval include the following:

4.1. SCC 14.16.440. Mineral Resource Overlay. The application requirements at SCC 14.16.440(8)(b) and (8)(g), the hearing examiner review criteria at SCC 14.16.440(9), and the incorporation by SCC 14.16.440(11) of the requirements at SCC 14.16.900 are applicable.

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

4.2. SCC 14.16.440(8)(b) requires a report by a qualified geologist, hydrogeologist, or licensed engineer that characterizes the area's groundwater, including: (a) a description of the geology and hydro-geology of the area, such as the delineation of aquifer, aquitards, or aquicludes, hydrogeologic cross-sections, porosity and horizontal and vertical permeability estimates; (b) a determination of the direction and velocity of ground water movement, water table contour and potentiometric surface maps, if applicable; and (c) a map containing the limits of the mine, buffer zones, location of all ground water wells within 1 mile distance down gradient from the property boundaries, location of all perennial streams and springs, and definition or specification of locations of aquifer recharge and discharge areas. At a minimum, the application for the mine did not include a map showing the wells and springs in the vicinity of the mine property.

4.3. SCC 14.16.440(8)(g) requires the identification and description of those critical areas designated and regulated by Chapter 14.24 SCC, together with any critical areas studies required by Chapter 14.24 SCC. The application did not identify and describe unstable slopes to the west or provide critical areas studies to evaluate the proposed mine's impacts on those unstable slopes.

4.4. SCC 14.16.440(9)(a) requires the Hearing Examiner to evaluate mining special use permits against the Skagit County Code's special use approval criteria and also imposes the burden of proof on the applicant to show that impacts are mitigatable to warrant permit approval. The application omits information that would be necessary to demonstrate that the mine project's potential slope instability impacts are consistent with the special use criteria and that they are mitigatable and have been properly conditioned to mitigate their impacts.

4.5. SCC 14.16.440(9)(b) directs the Hearing Examiner to consider the requirements of Chapter 14.16 SCC as minimum standards based on unique site-specific factors or conditions as appropriate to protect public health, safety, and the environment. The mine proposal does not offer sufficient information to determine whether it meets the minimum standards of Chapter

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

14.16 to protect public health, safety, and the environment. For example, the application does not acknowledge the directly adjacent unstable slope or evaluate the impacts of deforestation, soil, and rock removal on those slopes.

4.6. SCC 14.16.440(9)(c) states that appropriate site-specific conditions shall be required to mitigate existing and potential incompatibilities between the mineral extraction operation and adjacent properties. The lack of information about the mine's potential impacts on the adjacent unstable slope prevented the identification and application of mitigating conditions to address that risk.

4.7. SCC 14.16.440(9)(d) requires appropriate site-specific conditions to mitigate stormwater runoff and erosion impact. The absence of sufficient accurate information about the hydrogeologic regime at the mining site prevented the requisite examination and application of mitigating conditions.

4.8. SCC 14.16.900. Special use permits. A special use permit must demonstrate that the proposed activity will not adversely affect or prevent those uses normally allowed within the respective district. The applicant bears the burden of proving through evidence in the application that:

(A) The proposed use will be compatible with existing and planned land use.

(B) The proposed use complies with the Skagit County Code.

(C) The proposed use will not create undue noise, odor, heat, vibration, air and water pollution impacts on surrounding, existing, or potential dwelling units, based on the performance standards of SCC 14.16.840.

(D) The proposed use will not generate intrusions on privacy of surrounding uses.

(E) The proposed use will not cause potential adverse effects on the general public health, safety, and welfare.

(F) For special uses in Industrial Forest—Natural Resource Lands, Secondary Forest—Natural Resource Lands, Agricultural—Natural Resource Lands, and Rural Resource—Natural Resource Lands, the impacts on long-term natural

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

resource management and production will be minimized.

(G) The proposed use is not in conflict with the health and safety of the community.

(H) The proposed use will be supported by adequate public facilities or services and will not adversely affect public services to the surrounding areas, or conditions can be established to mitigate adverse impacts on such facilities.

(I) The proposed use will maintain the character, landscape and lifestyle of the rural area. For new uses, proximity to existing businesses operating via special use permit shall be reviewed and considered for cumulative impacts.

Due to the project's potential adverse impacts on unstable slopes and unexamined traffic impacts at significant intersections, the application does not demonstrate that the proposed mine complies with the Skagit County Code, that it will not cause potential adverse effects on the general public health, safety, and welfare, that it is not in conflict with the health and safety of the community, that it is supported by adequate public facilities and services in the nearby roadways, and that it will maintain the character, landscape, and lifestyle of the rural area that has grown up around the site.

4.9. SCC 14.24.410(2). The slopes immediately to the west of the mine property qualify as landslide hazard areas pursuant to SCC 14.24.410(2) because they are: (a) areas designated in the Department of Ecology, Coastal Zone Atlas of Washington as Unstable, with a recent slide; (b) slopes with a gradient of 15% or greater than intersect geologic contacts with permeable sediments overlying low-permeability sediment or bedrock with springs or groundwater seepage; (c) slopes of 40% or steeper with a vertical relief of 10 feet or more; (d) areas of previous failure such as landslides or failures as observed in the field or as indicated by official maps; and (e) potentially unstable areas resulting from rapid stream incision, stream band erosion, and undercutting by wave action. SCC 14.24.410(2)(a), (b)(i), (c), (d), and (e).

4.10. SCC 14.24.420. This section requires the preparation by a qualified professional of a geologic hazard site assessment for the mine because it lies within 200 feet of an area of known or suspected risk for geologically unstable condition and the geologic condition may pose

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

a risk to life and property, or other critical areas on and off the project area. SCC 14.24.420(1). Notwithstanding this express directive, the application did not include a geologically hazardous area site assessment for the unstable bluff directly adjacent to the western boundary of the mine property. Nor did the application generally evaluable the potential for the mine expansion to alter drainage even though it proposes to remove a substantial amount of vegetation and soil, including low permeable glacial till. That action will increase groundwater recharge in a manner that has the potential to impact the deep-seated landslide areas to the west because the mine site likely lies within the groundwater recharge area for the slide areas.

V. DESIRED OUTCOME/RELIEF REQUESTED

Evergreen Islands respectfully requests the following relief:

5.1. that the Board of County Commissioners reverse the Hearing Examiner's November 30, 2020 Decision approving Special Use Permit PL16-0556 as clearly erroneous, vacate the permit, and adopt its own findings, conclusions, and decision based on the record before the Hearing examiner; or

5.2. that the Board reverse the Hearing Examiner Decision and remand the matter to the Hearing Examiner to ascertain the project's impacts on the adjacent unstable bluff and State Route 20 intersections; and

5.3. Such other and further relief as the Board deems just and equitable.

Dated this 14th day of December, 2020.

Respectfully submitted,

LORING ADVISING PLLC

By _____
Kyle A. Loring, WSBA No. 34603
Attorney for Evergreen Islands

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

ATTACHMENT A

NOTICE OF DECISION

BEFORE THE SKAGIT COUNTY HEARING EXAMINER

Applicant:	Bill Wooding Lake Erie Pit LLC 13540 Rosario Road Anacortes, WA 98221
Agent:	Stephen Taylor McLucas & Associates, Inc. P. O. Box 53352 Lacey, WA 98509
Request:	Special Use Permit, PL16-0556
Location:	South of the intersection of Rosario Road and Marine Drive, within a portion of NW1/4 Sec. 11, T34N, R1E, W.M.
Land Use Designation:	Rural Resource-Natural Resource Lands (RRc-NRL) – Mineral Resource Overlay
Summary of Proposal:	To expand an existing gravel mine from 17.78 acres to about 53.5 acres, allowing removal of approximately 60,000 tons of gravel per year for approximately 60 years.
Public Hearing:	Commenced August 26, 2020, and continued on October 14, 2020, via telephone and GoToMeeting. Testimony by Planning and Development Services Staff, Applicant's agent, and Applicant. Testimony by 12 members of the public at first hearing, and by 34 members of the public at continued hearing.
Decision/Date:	The application is approved, subject to conditions. November 30, 2020
Reconsideration/Appeal:	Reconsideration may be requested by filing with Planning and Development Services (PDS) within 10 days of this decision, Appeal is the Board of County Commissioners by filing with PDS within 14 days of this decision, or decision on reconsideration if applicable.
Online Text:	The entire decision can be viewed at: www.skagitcounty.net/hearingexaminer

PROCEDURE

1. The site is zoned Rural Resource-Natural Resource Lands and is within a designated Mineral Resource Overlay (MRO). The MRO was enlarged in 2016 at the applicant's instigation to include the increased acreage he now seeks to mine.

2. The subject application for a Mining Special Use Permit was filed on December 2, 2016, after approval of the expanded Mineral Resource Overlay (MRO).

3. An Environmental Checklist under the State Environmental Policy Act accompanied the Comprehensive Plan amendment that increased the size of the MRO. This checklist was updated on June 6, 2017, to accompany the request for a Special Use Permit.

4. A Mitigated Determination of Non-Significance (MDNS) was entered on January 4, 2019. The MDNS was not appealed.

5. The public hearing was held telephonically and by GoToMeeting. It was initially convened on August 26, 2020. The Examiner then heard testimony from Staff, the Applicant's consultant, the Applicant and 12 members of the public. The Examiner continued the hearing to October 14, 2020, on motion of Evergreen Islands to insure that public notice was properly given.

6. The public hearing concluded on October 14, 2020. The Staff, Applicant's consultant and Applicant testified again. Then 34 members of the public were heard. The public testimony was overwhelmingly against granting the permit. A number of speakers urged doing more study before reaching a decision.

7. The Examiner held the record open through October 16, 2020, to allow for responses to the oral testimony given at the hearing.

FINDINGS OF FACT

The Setting

1. Bill Wooding, for Lake Erie Pit LLC, seeks to expand operation of an existing gravel mine from 17.78 acres to approximately 53.5 acres. The proposed expansion of mining would all occur within a recently enlarged Mineral Resource Overlay (MRO).

2. The site has been mined for sand and gravel since at least the 1960's

3. The pit is south of the intersection of Rosario Road and Marine Drive in the southwestern part of Fidalgo Island. It is legally described as within a portion of NW1/4 Sec. 11, T34N, R1E, W.M. To the north is Mount Erie and the city of Anacortes. To the east is Campbell Lake. To the south is Deception Pass. To the west is the salt water of Burrows Bay.

Is that right about a ridge? It's not on the maps.

Slopes steeply

4. In the immediate neighborhood, Lake Erie is across the road to the northeast. Devil's Elbow Lake, part of a large wetland area, is to the southeast over a rise and at a higher elevation than the present pit.

5. A substantial ridge on the west side of the mine property forms a steep bank separating the pit, physically and visually, from Rosario Road as it runs north-south. Across the road from this bank, the topography slopes downward to Burrows Bay.

6. Along Rosario Road and downhill toward the shore are residences. To the southwest is the Sunset Lane residential area. The two closest residences are 200 feet from the western portion of the existing and proposed mining operation. Residences are located within a quarter mile west, north, south and east of the project site.

7. Adjacent zoning is predominantly Rural Intermediate, and Rural Reserve.

8. The larger vicinity encompasses Campbell Lake, Mount Erie, and Deception Pass and includes a number of parks and recreation areas. The area is a major attraction for tourists.

Will it? This is part of the question given the lack of confirmed groundwater data.

The Proposal

9. The permit request is for permission to mine up to approximately 60,000 tons of gravel per year for approximately 60 years -- a total of approximately 3,600,000 tons (2,250,000 cubic yards). The proposal would extend mining over an area that is now almost completely forested.

10. The proposed mining will take the floor of the site from a 375-foot elevation down to a 250-foot mine base. Mining will stop at about 50 feet above the regional water table which at this location is at an elevation of approximately 200 feet. The mining plan has four phases.

11. The initial phase of the operation will involve removing timber from the mining areas. Once timber is removed, topsoil will be stripped off and stockpiled for eventual use in site reclamation.

12. Northeast from the mine Lake Erie is about 1000 feet down gradient. Within the northerly section of mining site, all surface runoff is to be captured in an armored trench from which it will be conveyed to a catch basin.

13. The mining plan is to remove gravel from the site in a counter-clockwise progression to the southwest, south and east of the present pit.

14. Mining operations will be conducted with an excavator and front end loader. Sand and gravel will be screened periodically using a power screen. It is proposed to crush large rocks using a portable crusher brought into the site once or twice a year (spring and fall).

15. The proposal calls for a 100-foot setback from property lines for all excavation and a 200-foot setback for all processing (screening/crushing).

16. Under the proposal, gravel will be loaded into trucks onsite and hauled out via a single exit which is to the north of the present pit. To handle peak requirements, the production sought will require 13 truckloads or 26 trips per day.

17. The applicant has advised that up to three employees will be working onsite during maximum operation. No offices or buildings are proposed. Water for workers will be brought in. Portable sanitation facilities will be used. Employee parking will occur offsite to the north at Lake Erie Trucking, which is also owned and operated by the applicant, Bill Wooding.

18. Fueling, truck maintenance, and storage of oil, lubricants and chemicals will not occur on site. Such operations will be carried out across the road at Lake Erie Trucking.

19. Proposed hours of operation are Monday through Friday from 8 a.m. to 5 p.m., and Saturdays from 8 a.m. to noon.

20. Changes in visual aesthetics will be minimized to the west by the existing perimeter berm and by the construction of new berms. Mining operations will continue to be visible from the north and this visibility will increase with clearing and expanded mining.

21. One purpose of the present application is to get a comprehensive reclamation plan into effect. When mining is finished, the plan is to bring in clean fill to raise the ground level to 300 feet and then to plant native grasses and other plants. The filling process will occur progressively, after each phase of mining is completed. The reclamation activities will be overseen by the State Department of Natural Resources.

Environmental Review

22. A Mitigated Determination of Non-Significance (MDNS) was issued on January 4, 2019, accompanied by an 18-page narrative entitled "SEPA Environmental Review Staff Report." The narrative reviewed impacts and mitigations for various elements of the environment. A paraphrased summary follows:

Earth -- *potential impact*: Destabilizing of slopes and increased erosion.
-- *analysis/mitigation*: Due to permeability of geologic formation, no significant erosion anticipated. Potential for shallow surficial landslides offset by 100 foot setback from the property line to provide a buffer to prevent failures from encroaching on neighboring property.

Air – *potential impact:* Excavation/transport equipment will generate dust
--*analysis/mitigation:* Dust controlled through best management practices control plan which includes spraying water on road and equipment. Dust shall not exceed Northwest Clean Air Agency, state and federal regulations.

Water – *potential impact:* Increased surface water runoff and impacts to ground water. Potential effects on perched and unconfined aquifers; draining of surface waters and wetlands.
analysis/mitigation: All surface water runoff from mining operations will be directed into the interior of the mine, collected in a detention pond and infiltrated on site. High infiltration rates minimize risk of runoff leaving site. Based on Hydrogeologic Report, mining activities will not adversely affect groundwater quality or quantity or result in draining surface water resources adjacent to the mine.

Plants and Animals – *potential impact:* Encroachment on wildlife habitat, wetlands
analysis/mitigation: No critical areas identified onsite, nearest wetland buffer does not extend onto mine site.

Energy/Health – *potential impact:* Use of petroleum fuels/possible spills
analysis/mitigation: Fueling and equipment maintenance done off site on impermeable surfaces. No toxic materials stored on site

Noise – *potential impact:* Operations may produce noise in excess of Washington State residential noise standards.
analysis/mitigation: Noise generated by mining operations will be muffled by topography except to the north. Noise control mitigation measures consistent with noise study shall be implemented, including:

- 100 foot mining setback from Rosario Road and all property lines.
- No mining on parcel P19108 (the most northerly parcel which borders the road.)
- Prior to mining on parcels P19158 and P90028 construct a 14 foot high earthen berm or equivalent to shield excavation equipment on western side of parcel.
- Prior to mining on parcel P19161 construct a 16 foot high earthen berm or equivalent to shield excavation equipment on north and east sides of parcel.
- Prior to mining on parcel P19164 construct a 12 foot high earthen berm or equivalent to shield excavation equipment on the north and east sides of the site.
- Rock crushing and screening operations are limited to the processing area indicated on the site plan.

The effect of these measures is anticipated to be compliance with state and county noise regulations.

Land & Shoreline Use – *potential impact:* Effects on nearby residential use of noise, traffic and dust associated with gravel mining. *analysis/mitigation:* Proposed mine expansion is 850 feet from nearest shore and 200 feet from nearest housing. Noise, emissions, dust generation and traffic are not anticipated to be exceed standards if mitigation measures are implemented.

Aesthetics/Light and Glare – *potential impact:* Changes in appearance from removing trees, creating more exposed mining area; effects of truck headlights. *analysis/mitigation:* Topography will minimize aesthetic impacts; berms will control some light and glare; reclamation will restore vegetation.

Recreation – *potential impact:* Staff finds no known recreational opportunities on or in the immediate vicinity of the proposed mine expansion, other than occasional target shooting in the pit. This reportedly only occurs with the permission of the mine owner and is not available to the general public No recreational shooting will occur during mining operations.

Historic and Cultural Preservation – *potential impact:* None known, *analysis:* Staff recommends a condition regarding action to take if cultural materials are discovered during operation of the mine.

Transportation – *potential impact:* Expanded gravel mining will increase truck and trailer traffic, generating an average of 13 outgoing loads per day or 3, 380 truck trips per year. Eight new truck trips are anticipated during peak hour traffic. Hours of operating are to be Monday-Friday: 8 am to 5 pm, Saturday: 8 am to 12 pm. Rosario Road, Marine Drive and Havekost Road will be used during mining operations. *Analysis/mitigation:* Upon review of professional traffic study and the County's existing regulations, Staff concluded that there will be no adverse impacts from traffic created by the mining expansion. *Analysis/mitigation:* Site distance to the west of the access road should be made to meet AASHTO guidelines and the existing site access should be upgraded by placement of an asphalt apron with rumble strips to prevent tracking of mud and debris off site.

Utilities and Public Services – *potential impact:* None

` 23. The MDNS contained the following conditions:

(1) The public right-of-way shall be kept clean. Tracking of mud and debris off site shall not be allowed. An asphalt apron, with rumble strips, shall be constructed from the asphalt edge of Rosario Road 100 feet into the property on the existing/proposed gravel mine access road to prevent tracking mud and debris off site.

(2) The applicant shall comply with Northwest Clean Air Agency (NWCAA) requirements, including all dust control requirements both on and offsite. Visible dust generation shall require immediate best management plan (BMP) implementation as described in the Lake Erie Pit air quality best management practices recommendations by Maul Foster Alongi dated September 15, 2016.

(3) Temporary erosion/sedimentation control measures, as approved by the Skagit County Planning and Development Services, shall be in place prior to the initiation and maintained for the duration of the project pursuant to Skagit County Code (SCC) 14.32, Stormwater Management Ordinance.

(4) The project shall comply with noise, vibration, and light/glare limitations as per SCC 14.16.840. Noise control mitigation measures, consistent with the noise study, shall include:

a. Maintain a 100 foot mining setback from Rosario Road and all property lines,
b. No mining shall occur on parcel P19108.
c. Prior to mining on parcels P19158 and P90028, a 14 foot high earthen berm or equivalent noise barrier shall be constructed to shield the excavation equipment on the western side of the parcel.
d. Prior to mining on parcel P19161, a 16 foot high earthen berm or equivalent noise barrier shall be construct to shield the excavation equipment on the northern and eastern side of the parcel.
e. Prior to mining on parcel P19164, a 12 foot high earthen berm or equivalent noise barrier shall be constructed to shield the excavation equipment on the northern and eastern side of the site.
f. Rock crushing and screening operations are limited to the processing area as indicated on the site plan.

(5) The project is limited to those activities described in the SEPA checklist and supporting documents. Significant deviation from the proposal may require additional review and approval by Skagit County Planning and Development Services.

(6) The site distance to the west of the access road to the mine does not meet AASHTO guidelines for intersection sight distance. The applicant shall clear parcel P19108 of brush, trees and perform site grading as necessary to increase the site distance to Marine Drive.

(7) The applicant shall comply with the provisions of Washington State Administrative Code (WAC) 173-200 & 173-201A as required to prevent surface water quality and groundwater impacts. Best management practices shall be utilized to prevent interference and/or degradation of water quality.

(8) Gravel mining operations shall not extend to a depth closer than 10 feet above the seasonal high groundwater as established by the Hydrogeologic Site Assessment report by Maul Foster Alongi, dated September 28, 2016.

(9) All soil imported for reclamation of the parcel must be certified as "clean soils," as defined by WAC 173-350-100, by a consulting environmental geologist and independent testing laboratory. Written certification of the clean soils for each source of soil shall be provided to Skagit County Planning and Development Services and the Skagit County Health Department prior to transportation and placement of soil material onsite. The certification shall indicate the source of the soil tested, locations of the samples obtained, laboratory test results for each source of soil, and the soil sampling data forms.

(10) All fill soil imported to the site for the purpose of raising the mine base floor elevation to 300 feet mean sea level shall be placed in lifts not to exceed 8 inches in depth and compacted to 95% of ASTM D-1557 modified proctor. Soils compaction test reports from a licensed geotechnical engineer verifying compaction shall be provided to the Skagit County PDS annually. The report shall indicate the source of the soil tested, locations of the compaction tests onsite, depth of fill at time of testing, proctor test results for each source of soil, and the soil compaction test data form.

(11) A class IV general forest practice permit shall be obtained from the Washington Department of Natural Resources prior to harvest of any timber onsite.

(12) A Construction Stormwater General or Industrial Permit may be required by the Department of Ecology (WSDOE) for this project. Contact the WSDOE Bellingham Field Office to determine if a permit is required.

(13) Should any human remains, archaeological, historic or cultural materials be discovered during construction, work in the affected area shall cease immediately and the area shall be secured. Within 24 hours of the discovery, or as soon thereafter as possible, the developer shall notify the Skagit County Sheriff's office, Skagit County Planning and Development Services, the Washington State Department of Archeology and Historic Preservation and affected tribes. If following consultation with the above parties it is determined that an archaeological and cultural resource assessment is required, the project developer shall retain the services of a professional archaeologist to prepare such an assessment. Project work in the affected area shall only continue when in

conformance with applicable state and federal laws.

24. The MDNS was not appealed.

Discussion

25. The Mineral Resource Overlay (MRO) was enlarged in 2016 to encompass the area of mining contemplated by the subject permit application.

26. The application describes the Lake Erie Pit as currently being in operation, producing 20-30,000 tons of sand and gravel per year. At the hearing, numerous persons testified that no operations have been observed at the pit for several years.

27. The preponderance of evidence is that the mining operation has been essentially moribund in recent times. Over the years of the mine's existence, residential development of the surrounding area has increased. The neighborhood context today has changed from when mining at the site began. This probably accounts for the significant outpouring of opposition to this application.

28. Be this as it may, the question of the appropriate use of the site has been legislatively resolved by the approval of an enlarged Mineral Resources Overlay (MRO) which encompasses the area of the applicant's mining proposal. Under SCC 14.16.400(1) the purpose of the overlay is to

> maintain and enhance natural resource-based industries by . . . allowing continued operation of existing legally established uses, and by assuring that use of adjacent lands does not interfere with the extraction and quarrying of minerals.

29. The MRO code provisions explicitly provide for the expansion of pre-existing mining operations through the mechanism of a Mining Special Use Permit. SCC 14.16.400(3)(c).

30. The criteria for Mining Special Use permits are weighted towards approval. Under SCC 14.16.440(9), site-specific conditions are mandated to mitigate "incompatibilities between mineral extraction operations and adjacent parcels." The County Staff Report endeavors to fulfill this requirement through the recommendation of 15 conditions of approval.

31. Analysis provided by the applicant indicates surface and ground water flow toward Lake Erie is to the north and northeast of the site. Submissions from the public, including evaluation by professionals, call this into question. There is widespread concern that with more mining to the south some infiltrating water is likely to flow to the west and that slope and bank stability in that direction may be adversely affected. The Del Mar water line, Rosario Road and a number of homes lie to the west.

32. The Examiner finds that the preponderance of evidence supports the analysis of the applicant as to surface and groundwater flow. Three hydrogeologic analyses were completed by the applicant to evaluate groundwater conditions onsite. The Examiner finds that the preponderance of evidence supports the view that the flow (surface and ground) is to the northeast and away from Dodson Canyon and Sunset Lane.

33. Concern was also expressed at the hearing and in correspondence about the potential dewatering of wetlands in the vicinity. The applicant installed an observation well to assist evaluation of whether a perched aquifer exists between Devil's Elbow Lake and the mining area. The evaluation concluded that a perched aquifer is not present in the area. There appears to be no hydraulic connection between Devil's Elbow Lake and the units to be mined,

34. A professional traffic analysis commissioned by the applicant indicates that the added truck trips will not adversely affect the level of service or safety in the immediate vicinity. There appears to be no solid evidence that the relatively modest addition of truck traffic from the mine will cause congestion or measurably affect safety on the surrounding roads. The Washington State Department of Transportation did not comment on this proposal.

35. The County's Department of Public Works reviewed the applicant's traffic study and essentially concurred with its findings. A sight distance issue at the entrance was identified, but found to be curable by clearing and grading. The condition of roads in the area was found to be excellent and thus able withstand the anticipated truck traffic. Possible conflicts with school busses, pedestrian or bicycle use were not found significant.

36. A noise study prepared by professionals in acoustics analyzed noise from future noise sources around the site. The study determined that without noise control, future operations would exceed State standards at nearby residences. The study recommended seven control measures which are reflected in conditions of the MDNS. These consist of setbacks and a requirement for berms at various locations. It was estimated that the noise control measures would reduce residential noise levels to below 60 dbA, which is the regulatory limit here.

37. Modernly, the character, landscape and lifestyle of this rural area is that which supports the scenic and recreational uses nearby. The local outcry about this project is essentially the expression of an opinion that the expansion of this mine conflicts with the character of the area. However, the adoption of the MRO around the mining site appears to foreclose this argument as a legal matter.

38. The applicant's testimony was that he has no immediate plans for significantly expanding the operation of the mine. He is elderly and said that the current application represents part of an attempt to get his affairs in order. He has no plans to sell the property.

39. Any finding herein which may be deemed a conclusion is hereby adopted as such.

CONCLUSIONS OF LAW

1. The Hearing Examiner has jurisdiction over this proceeding. SCC 14.16.440(9).

2. The provisions of Chapter 43.21C RCW, the State Environmental Policy Act (SEPA), have been met. The time to appeal the MDNS has long-since passed. Therefore, the preparation of an Environmental Impact Statement cannot not now be required.

3. Nonetheless, the Examiner concludes that likely environmental consequences of the proposal have been adequately evaluated.

4. The question of issuance of a Mining Special Use Permit was essentially decided by inclusion of the site within a Mineral Resources Overlay (MRO). See SCC 14.16.440. Under these code provisions a permit is to be issued "if the impacts are mitigatable." SCC 14.16.440(9).

5. Mitigation is not a legally defined term in this context. It must therefore be taken to carry its ordinary meaning. Mitigation does not mean the elimination of all impacts. Rather it means the moderation or reduction of impacts.

6. The Examiner concludes that the conditions of approval imposed here are appropriate site-specific conditions which mitigate existing and potential incompatibilities between the mineral extraction operation and adjacent parcels. The conditions imposed are reasonable, practicable and generally capable of being achieved by the mine operator.

7. In sum, the requirements for approval of a Mining Special Use Permit have been met.

8. The proposal is also consistent with the general Special Use Permit requirements of SCC 14.16.900(1)(b)(v). In particular, the activities, as conditioned, will not unduly intrude on residential uses; cause adverse effects on public health, safety and welfare; nor interfere with the character, landscape and lifestyle of the particular rural area.

9. Were the pit not already in existence, this would be a different case. The application is essentially concerned with the continuation of a long-time pre-existing use. The character of the particular rural area already includes this mine.

10. However, it is vital to the success of this undertaking, that the permittee closely follow the conditions that have been imposed. Therefore the Examiner has added a provision for review of this approval at five year intervals.

11. Any conclusion herein which may be deemed a finding is hereby adopted as such.

CONDITIONS

1. The development and operation of the gravel mine shall be as described in the application materials, the SEPA checklist, and supporting documents, except as the same may be modified by these conditions.

2. A Department of Natural Resources (DNR) Surface Mine Reclamation Permit shall be applied for and obtained prior to mining as per Chapter 78.44 RCW. No mining may take place prior to obtaining a reclamation permit from DNR.

3. The applicant shall obtain all other required permits and shall abide by the conditions of same.

4. The applicant shall comply with all conditions set forth in the Mitigated Determination of Non-Significance (MDNS) entered on December 3, 2018 (See Finding 23 above).

5. Significant deviation from the proposal will require additional review and approval by Skagit County Planning and Development Services (PDS).

6. The operation of the mine shall be limited to daylight hours only.

7. Rock crushing shall be limited to twice a year in the spring and fall. Any such operations shall be limited to daylight hours and no more than a month in duration.

8. In the event that cut slopes from the mining operation exceed 50%, the top of the slope shall be fenced or otherwise marked to prevent access.

9. PDS shall be notified within 30 days of any change in ownership of the affected parcels by submitting a letter to the Planning Director referencing the permit number (PL16-0556).

10. The proposal shall be commenced within two year of the permit approval per SCC 14.16.900(d).

11. This permit shall be void if the use is abandoned for more than a year.

12. Activities under this permit shall be reviewed by the County every five years, commencing with 2025. Prior to this review, the permittee shall submit a report to PDS detailing operations during the previous five-year period. If any failures to comply with these conditions or other problems are noted, the County shall take such action as is appropriate.

13. Failure to comply with any permit condition may result in permit revocation. SCC14.16.900(1)(b)(iii).

ORDER

The requested Special Use Permit (PL16-0556) is approved, subject to the conditions set forth above.

SO ORDERED, this 30th day of November, 2020.

Wick Dufford

Wick Dufford, Hearing Examiner

Transmitted to Applicant, County staff, interested parties, November 30, 2020.

EXHIBIT #26

BOARD OF COUNTY COMMISSIONER'S REMAND/RESOLUTION TO THE HEARING EXAMINER

RESOLUTION # ___

A Resolution Pertaining to the Closed Record Appeal Before the Skagit County Board of Commissioners Of Special Use Permit PL16-0556

WHEREAS, Evergreen Islands ("**Appellant**") timely filed this closed record appeal to the Board of Skagit County Commissioners (hereinafter, the "**Board**"), pursuant to Skagit County Code ("**SCC**") 14.06, challenging the Skagit County Hearing Examiner's Decision approving Special Use Permit PL16-0556 (the "**Permit**"); and

WHEREAS, the Permit authorizes the expansion of an existing 17.78 acre gravel mine located on the west side of Fidalgo Island to an ultimate size of 53.5 acres (hereinafter, the "**Mine**"); and

WHEREAS, County Planning staff did not require a Geologically Hazardous Site Assessment associated with the steep coastal area located to the west/northwest of the Mine, based principally on an inference derived from reports furnished by a professional hydrogeologist on the Applicant's behalf to the effect that groundwater at the Mine flows to the northeast, toward Lake Erie; and

WHEREAS, the Appellant timely raised concerns before the Hearing Examiner regarding potential landslide risk arising from the potential for increased groundwater migration to the west/northwest, due to the Mine's expansion and attendant removal of soil and vegetation, which, the Appellant contends, will alter groundwater behavior in the vicinity of the Mine; and

WHEREAS, the Appellant furnished evidence to the Hearing Examiner regarding the presence of springs on the coastal bluff to the northwest of the Mine at an elevation downgradient of the inferred groundwater level, and the testimony of a geologist who opined that the expanded Mine will create an increased landslide risk; and

WHEREAS, the Appellant contends that the coastal bluff area to the west/northwest of the Mine is a geologically hazardous area pursuant to SCC 14.24.410; and

WHEREAS, in light of the foregoing, the Appellant contends on this appeal that the Hearing Examiner erred, in part, by failing to require a Geologically Hazardous Site Assessment pursuant to SCC 14.24.420; and

WHEREAS, pursuant to SCC 14.06.170(10), the Board may take one of the following actions:

(1) Deny the appeal and affirm the decision of the Hearing Examiner;

(2) Find the Hearing Examiner's decision clearly erroneous, adopting its own findings, conclusions and decision based on the record before it; or

(3) Remand the matter for further consideration by the Hearing Examiner.

NOW, THEREFORE, BE IT RESOLVED:

1. Pursuant to SCC 14.60.170(10)(3), 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.

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

WITNESS OUR HANDS AND THE OFFICIAL SEAL OF OUR OFFICE this 23rd day of February 2021.

BOARD OF COUNTY COMMISSIONERS
SKAGIT COUNTY, WASHINGTON

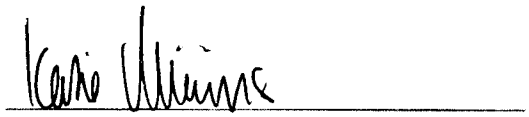
SKAGIT COUNTY COMMISSIONERS SEAL COURT STATE OF WASHINGTON

Lisa Janicki, Chair

Peter Browning, Commissioner

Ron Wesen, Commissioner

ATTEST:



Clerk of the Board

APPROVED AS TO FORM:

Will Honea, Senior Civil Deputy
Skagit County Prosecutor's Office

EXHIBIT #27

HEARING EXAMINER REFERRAL TO SKAGIT COUNTY PLANNING & DEVELOPMENT SERVICES

BEFORE THE SKAGIT COUNTY HEARING EXAMINER

In the Matter of a Special Use Permit To Expand an Existing Gravel Mine	))	PL16-0556
BILL WOODING **LAKE ERIE PIT, LLC** Applicant.	))))	**REFERRAL TO PLANNING AND DEVELOPMENT SERVICES**

On the appeal of Evergreen Islands, the Skagit County Commissioners remanded this matter to the Skagit County Hearing Examiner for further consideration of the following:

- 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 14.24.200-.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.

After consideration of the above directions, the Examiner has determined that the appropriate course now is to refer this matter to Planning and Development Services (PDS) with instructions to direct the Applicant to cause a Geologically Hazardous Site Assessment to be prepared and submitted to PDS.

On receipt of such assessment, PDS shall review it and provide an Amended Staff Report to the Hearing Examiner containing the department's analysis and recommendations in light of the report.

Thereafter, the Examiner shall schedule and hold a supplementary public hearing in this matter, limited to comment on the Geologically Hazardous Site Assessment. Following this hearing, based on the record made, the Examiner shall issue a decision imposing such additional conditions, if any, as may be necessary to mitigate risks that have been identified.

SO ORDERED, this 9th day of March, 2021.

Wick Dufford, Hearing Examiner

Transmitted to: County Commissioners, Applicant, Planning and Development Services, Evergreen Islands on March 9, 2021.

EXHIBIT #28

-MARCH 23, 2021 LETTER FROM PDS TO THE APPLICANT REQUESTING ADDITIONAL INFO;

-MAY 27, 2021 LETTER FROM PDS TO APPLICANT WITH DEADLINE FOR ADDITIONAL INFO;

-JULY 21, 2021 LETTER FROM PDS DENYING SPECIAL USE PERMIT APPLICATION

SKAGIT COUNTY PLANNING & DEVELOPMENT SERVICES

Bill Wooding
Lake Erie Pit, LLC

March 23, 2021

RE: Hearings Examiner Referral of PL16-0556 to Skagit County Planning & Development Services

Mr. Wooding,

Please find attached a copy of the remand from the Board of County Commissioners as well as a copy of the Order that the Hearings Examiner sent deferring the next steps to Skagit County Planning and Development Services (PDS). Per the direction of the Hearings Examiner the applicant shall prepare a Geologically Hazardous Area Site Assessment associated with the steep coastal area located to the west/northwest of the mine pursuant to Skagit County Code (SCC) 14.24.420 and prepare a Geologically Hazardous Mitigation Area Plan pursuant to Skagit County Code 14.24.430.

SCC 14.24.420(2)(g) allows the Administrative Official to require additional site assessment elements as may be required. In addition to the elements required by SCC 14.24.420, PDS is requesting the assessment specifically address the concerns raised by the Board of County Commissioners' in their remand. Those specifc site assessment elements to be addressed within the assessment are as follows:

- Analyze the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion and attendant removal of soil and vegetation which could alter groundwater behavior in the vicinity of the mine.
- Analyze the presence of springs on the coastal bluff to the northwest of the mine that are at an elevation down gradient of the inferred groundwater level.
- Respond to the testimony of the professional geologist who identified that the proposed mine expansion will create an increased landslide risk.

Please let me know if you have any questions.

Respectfully,

Michael Cerbone
Assistant Director
Skagit County Planning and Development Services

Cc: Parties of record, Skagit County Hearings Examiner, Skagit County Board of County Commissioners

SKAGIT COUNTY PLANNING & DEVELOPMENT SERVICES

Bill Wooding
Lake Erie Pit, LLC

May 27, 2021

RE: Hearings Examiner Referral of PL16-0556 to Skagit County Planning & Development Services

Mr. Wooding,

Please note the County requested additional information from you to assist with the review of your application. The specific request for additional information was put in writing to you and your representative on March 23, 2021. Please accept this letter as formal notification that the additional information needs to be provided by 4:30 PM on July 21, 2021 (SCC 14.06.105). Failure to submit the additional information requested within this timeframe will result in your application being denied.

Please let me know if you have questions or would like to discuss this in more detail.

Respectfully,

Michael Cerbone
Assistant Director
Skagit County Planning and Development Services

Planning & Development Services

1800 Continental Place ▪ Mount Vernon, Washington 98273
office 360-416-1320 ▪ pds@co.skagit.wa.us ▪ www.skagitcounty.net/planning

CERTIFIED MAIL

July 21, 2021

William W. Wooding
Lake Erie Pit, LLC
13540 Rosario Road
Anacortes, Washington 98221

RE: Lake Erie Trucking Gravel Pit 1, Special Use Permit Application, PL16-0556

Dear Mr. Wooding:

On December 2, 2016, you submitted an application for a Special Use Permit to permit the expansion to your existing Lake Erie gravel mine. Since then, your application has undergone SEPA environmental review and a public comment period.

Your application for a Special Use Permit went before the Hearing Examiner who approved it. This decision by the Hearing Examiner however was appealed by the appellant Evergreen Islands to the Board of County Commissioners.

The Board of County Commissioners remanded this matter back to the Hearing Examiner to determine if a Geologically Hazardous Site Assessment addressing landslide risk and subsurface water flow was necessary. The Hearing Examiner then ordered the assessment to be completed.

On March 23, 2021, former Assistant Planning Director Michael Cerbone mailed you a copy of the remand from the Board of County Commissioners as well as a copy of the order that the Hearing Examiners sent listing the next steps that are required (See Attached).

Then on May 27, 2021, Assistant Planning Director Michael Cerbone wrote you another letter identifying that additional information has been requested of you in correspondence dated March 23, 2021, and that this additional information needs to be provided to the Planning & Development Services Department by 4:30 PM on July 21, 2021 per Skagit County Code (SCC) 14.06.105. Mr. Cerbone further stated that failure to submit the requested information within this timeframe would result in your application being denied.

Yesterday (July 20, 2021), we received an email from your representative Stephen Taylor stating that you have contracted with a consultant [Canyon Environmental Group] to assist with the requested Geologically Hazardous Site Assessment but that you were requesting an extension past the expiration date of July 21, 2021 as was listed in Michael Cerbone's letter.

Please note however that per SCC 14.06.150(1), "*If additional information is requested pursuant to SCC 14.06.100(5), an applicant has 120 days to submit the required information. If all of the requested information is not received within 120 days, the Administrative Official or designee shall deny the application for failure to timely submit requested information consistent with Subsection (3) of this Section, unless the following exception applies:*

(a) The Department may grant 1 or more (although not exceeding 3) 3-month extensions to this time frame if the following criteria are met:

(i) A written request for extension is submitted at least 21 days prior to the expiration date; and

(ii) The applicant demonstrates that circumstances beyond the control of the applicant prevent timely submittal of the requested information; and

(iii) The applicant provides a reasonable schedule for submittal of the requested information."

Since the request for additional information has been greater than 120 days and we don't believe you meet the criteria above for an exception, your request for an extension is hereby denied along with your application for a Special Use Permit per Skagit County Code 14.06.105(3).

You may appeal this decision to the Skagit County Hearing Examiner as a Level 1 decision pursuant to Skagit County Code 14.06.110(7).

If you have any questions, please let me know. I can be reached by phone at (360) 416-1423 or via email at kcricchio@co.skagit.wa.us. Thank you.

Sincerely,

Kevin Cricchio

Kevin Cricchio, AICP, ISA
Senior Planner

Enclosures: Hearing Examiner Remand
Michael Cerbone's May 27, 2021 letter
SCC 14.06.105 & SCC 14.06.110(7)

EXHIBIT #29

APPLICANT'S APPEAL OF PLANNING & DEVELOPMENT SERVICES DENIAL OF SPECIAL USE PERMIT

Appeal or Request for Reconsideration

Planning & Development Services · 1800 Continental Place · Mount Vernon WA 98273
voice 360-416-1320 · inspections 360-416-1330 · www.skagitcounty.net/planning

File #: PL21-0421

RECEIVED
AUG 03 2021
SKAGIT COUNTY PDS
Received by: akx C

Appeal ☐ ☐

What are you appealing?

- ☒ Appeal of an Administrative Interpretation/Decision/Action to the Hearing Examiner
- ☑ Appeal of an Administrative Order to Abate (code enforcement order) to the Hearing Examiner
- ☐ Appeal of Impact Fees to the Hearing Examiner (impact fees must be paid) (SCC 14.30.070)
- ☐ Appeal of Hearing Examiner Decision/Action to the Board of County Commissioners
- ☐ Request for Reconsideration of a Hearing Examiner Decision (SCC 14.06.180)

File # of Appealed Decision or Permit	PL16-0556	**Appeal Fee**	$ 1,360.00	*PDS will calculate*
Date of Appealed Decision or Permit	July 21, 2021	**Publication Fee**	$ 203.50	*PDS will calculate*

PDS staff: do not accept appeal form without full payment of fees

Appellant

Standing to appeal	☒ Permit applicant ☐ Party of Record ☐ Party subject to code enforcement order ☐ Other				
Name	Willam Wooding				
Address	13540 Rosario Road				
City, State	Anacortes	**Zip**	98221	**Phone**	360-708-8559
Email	bwooding31@comcast.net	**Signature**	William D. Wooding		

Attorney or Representative ☐ None

Name	Stephen Taylor - Mining Consultant				
Address	P.O. Box 5352				
City, State	Lacey	**Zip**	98509	**Phone**	360-456-8248
Email	s.l.taylor7117@gmail.com	Stephen Taylor 8/2/2021			

Attachments

☑ For any of the **appeals** listed above, please attach a concise statement with numbered responses to the following questions.

1. What is your interest in this decision?
2. How are you aggrieved by the decision you are appealing?
3. What are the specific reasons you believe the decision is wrong?
   e.g. erroneous procedures, error in law, error in judgment, discovery of new evidence
4. Describe any new evidence.
5. List relevant sections of Skagit County Code.
6. Describe your desired outcome or changes to the decision.

☐ For a request for **reconsideration** of a Hearing Examiner decision, attach a statement identifying the specific errors alleged.

McLUCAS & ASSOCIATES, INC.

CONSULTING GEOLOGIST
INDUSTRIAL MINERALS AND AGGREGATE SPECIALISTS

"IT'S ALL ABOUT THE ROCK QUALITY – PERMITS – MARKETAREA"
P.O. Box 5352, LACEY, WA 98509 * (360) 456-8248 * FAX (360) 456-8248 *
mclucastaylor@qwestoffice.net

LAKE ERIE PIT 1, LLC – PL 16-0556
APPEAL & REQUEST FOR RECONSIDERATION

ATTACHMENTS: **8/3/2021**

#1. What is your interest in this decision?

McLucas & Associates, Inc. is a registered corporation since the 1980's. The company concentrates on Permitting Mines and providing mining clients Mineral Valuations (see attached brochure). McLucas has been working with Bill Wooding, owner of Lake Erie Pit 1, LLC, in preparing the expansion documents for the Lake Erie Pit for the past 7 years. Due to the three hospitalizations this year of Stephen Taylor, (mining consultant on this project), the difficulty of finding a qualified Hydrologist in Skagit County to provide the necessary required drilling and evaluation for the site and the necessary time to schedule the required drilling of the site, so that we had the necessary data for review by the Hearings Examiner and Skagit County Planning Commission. Due to these complications, we were not able to meet the Skagit County timeline for submittal. We therefore request additional time for reconsideration, so we can complete the required document submittal.

#2. How are you aggrieved by the decision you are appealing?

Both Bill Wooding, owner of Lake Erie Pit and Stephen Taylor, mining consultant are aggrieved by the decision of cancelling our 6-year plight to expand the Lake Erie Mine to accommodate the growing need for construction aggregates in Skagit County. We both feel that the time limit imposed to complete this goal was not adequate.

#3. What are the specific reasons you believe the decision is wrong?

(a) Not adequate time to find a qualified hydrologist to provide the drilling and then schedule a driller. (90-days minimum for scheduling).
(b) A set time for completion of task, dictated by Skagit County Code, without any means for extending the completion time. Drilling should happen between the months of November through March (wet months). We received notice and time limitation in March 2021. There wasn't any way we could have met the allowed schedule and preformed a quality drilling program and submittal.
(c) It appears, Skagit County Planning Codes do not have the means for exceptional times or events that have happened with this project with the injury of the Mining Consultant, Covid Pandemic and the difficulty of finding a Qualified Hydrologist for the very difficult task.
(d) We feel that the Hearing Examiner should not have given Evergreen Island an extension by declaring that the Property Owners had not been given notice of the hearing, under oath! Skagit County confirmed that all property owners had been given notice of the Hearing.

#4. Describe any new evidence?

(a) We have attached the summary of the Hydrologist McLucas had contacted in finding one that would do the Required Drilling and Critical Area Report. Each one had to be contacted 8 previous Special Use reports sent to them for review and consideration, which was very time consuming.
(b) The same Summary also has the Hospitalization (3 hospitals) of Stephen Taylor, Mining Consultant, the first half of this year.
(c) Both Mr. Wooding and Mr. Taylor also feel that Skagit County errored when they gave Evergreen Islands an extension. Evergreen Islands stated at the Hearing, that adjoining Property Owners had not been Notified of the Hearing date and issues. The Hearing Examiner gave "Evergreen Islands an Extension to Prepare New Testimony". John Cooper, Skagit County, went and checked this immediately. John Cooper returned within 30 minutes, to inform the Hearing Participants and Hearing Examiner that all Residents had been Notified of the hearing date and issues. Evergreen Islands, "Under Oath" stated the Property Owners had not been notified! We feel that the Hearing Examiner should have Retracted the Extension to Evergreen Islands to prepare new testimony.

#5. List relevant sections of the code.

(a) For review of the codes, we would require an attorney but, we do not wish to do so. Both Bill Wooding and Stephen Taylor are "Working Stiffs". Mr. Wooding has run the Lake Erie Mine and a Construction Company for 40-years and Stephen Taylor has spent 25 years providing permits and mineral valuation for miners in Washington, Oregon and other Northwest States.
(b) We do feel that Evergreen Islands should not have been given an extension to prepare new testimony! Lying under oath should be immediate dismissal of their case!

#6. Describe your desired outcome.

Bill Wooding and Stephen Taylor are hoping that Skagit County will provide the necessary time for McLucas to finish this project as directed by Skagit County and the Hearing Examiner. We estimate this will take approximately 6-months depending on the drilling. We have a Hydrologist aboard, Canyon Environmental Group and hope to get started immediately.

Sincerely,

Stephen Taylor
McLucas & Associates, Inc.

Sincerely,

Bill Wooding
Lake Erie Pit 1, LLC

Attachments:

(1) McLucas Brochure
(2) Summary of Hydrologists contacted & Mr. Taylor's Hospitalizations

Gmail Stephen Taylor <s.l.taylor7117@gmail.com>

Hydrologists I contacted

1 message

Stephen Taylor <s.l.taylor7117@gmail.com> Thu, Jul 22, 2021 at 11:49 AM
To: William Wooding <bwooding31@comcast.net>

Bill, I contacted the Geologic Companies looking for Hydrologist in Skagit County:

(1) Canyon Environmental Group
(2) Saturnah 2o Group
(3) Sound Geology
(4) Coastal Geologic Services
(5) Cooper & Associates

Hospitals & Doctors I spent time with this year in repairing my knee and complications:

(1) CHI Francisan Rehabilitation Hospital, Tacoma
(2) Providence Centralia Hospital
(3) Providence St. Peter Hospital, Olympia
(4) Sea Mar Community Health Center

Stephen Taylor

McLUCAS AND ASSOCIATES, INC.

CONSULTING GEOLOGISTS, INDUSTRIAL MINERALS, AGGREGATE, AND MINERAL VALUATION SPECIALISTS

Glennda McLucas-Taylor

Cradle to Grave Industrial Minerals Mining

25 YEARS OF EXPERIENCE

ASSOCIATES: U.S.G.S. Trained Field Mappers, Mineral Economist, Hydrogeologist, Geophysicist, Air Quality, Noise, Traffic Specialists, and Real Estate Appraisers

P.O. Box 5352 Lacey, WA 98509 * (360) 456-8248 * FAX (360) 438-1881

E-mail mclucastaylor@qwestoffice.net

Mineral Resource & Mine Development

LOOKING SOUTH AT PROCESSING PLANT AND DOT PARCEL

Geologic field evaluation of all Burlington Northern Railroad subsidiary company lands in the northwest States of Idaho, Oregon, and Washington for the purpose of determining the occurrence, quantity and quality of sand & gravel and bedrock aggregate sources on BNRR land. The project spanned 18 month from June, 1987 through December, 1988, and involved 2,040 hours of geologic services. June and July of 2003, geologic reconnaissance of Plum Creek Timber Company ownership in Kalispell and Missoula region of Montana to evaluate the bedrock formations in terms of their value in the decorative rock and dimension stone industry.

1) Geologic and geophysical exploration; 2) reserve calculation through AutoCADD analysis; 3) laboratory aggregate-quality determination; 4) phased mine and reclamation plan development, involving computerized design; 5) coordination of all subcontract work necessary for preparation of complex environmental impact statements; 6) environmental controls, including: equipment petroleum product containment and disposal; storm water control; reclamation stockpile stabilization; visual, dust and noise impact control; and wash-water fines settling and disposal; 7) gravel washing production, well development, and associated hydro geologic investigation; 8) aggregate product market investigations.

Detailed information on all projects available on request

Clients:

Ashgrove Cement
Pope Resources
Cadman Gravel Co.
Comico American
Concrete Nor'West
J.R. Hayes & Sons
Kiewit Pacific Corp.
Lafarge Concrete
Lakeside Sand & Gravel
Longview Fibre Co.
Holnam Corp.
Menasha Corp.
Plum Creek Timber Co.
US Oil & Refining
Trillium Corp.
Scarsella Brothers
Mine Management
Industrial Mineral Prod.
Mine Permit Procurem.
Manke Lumber Company
City Transfer of Kent
CSR/Associated/Rinker
Port Blakely Timber Co.
Central Reddi-Mix
Stoneway Concrete
Shamrock Lands
Kennedy Creek Quarry
Mineral Waste Disposal Utilizst.
Phoenix Resources Recovery
Coal Mine Hazard Studies
Great Northern Resources
Cascade Security Bank
Palmer Coking Coal Co.
Mineral Inventories
Meridian Aggregates
Plum Creek Timber Co.
Weyerhaeuser Company

McLucas has permitted 9 mines that are currently in operation

Mineral Valuation Clientele

Government Agencies
U.S. Bankruptcy Court
U.S. Department of Justice
U.S. Fish & Wildlife Department
Washington State Attorney General
WA State Dept. of Parks & Recreation
Clallam County Public Works Dept.
Snohomish County Public Works Dept.
Skagit County Public Works Dept.
City of Everett, Public Works Dept.
City of Lacey, Public Works Dept.
Port of Shelton, WA
Port of Bremerton, WA
Seattle City Light
Nature Conservancy

Aggregate Production Companies
General Electric
Ashgrove Cement, Seattle, WA
City Transfer of Kent, Dieringer, WA
Cominco American, Spokane, WA
Friend and Rikalo, Aberdeen, WA
Kennedy Creek Quarry, Shelton, WA
Lafarge Concrete, Vancouver, B.C.
Lake Industries, Marysville, WA
Mahaffey Enterprises, Kennewick, WA
Mark Haugebak, Boise, ID
Mark Litchman, Honolulu, HI
Menasha Corporation, Centralia, WA
Pope Resources, Poulsbo, WA
Rominco, L.L.C., Lake Stevens WA
*Tilbury Cement Products, Delta B.C.
Toledo Sand and Gravel, Toledo, WA
W.H. Gregory, Dallesport mine, Gresham, OR
Wilder Construction Co., Everett, WA (11 mines)
US Oil & Refining

Real Estate Appraisers & Lending Institutions
Seafirst Bank (Butler Mine, estate valuation)
Security Pacific Bank, Bellevue, WA
U.S. Bank of Washington, Seattle, WA
Strickland, Meischman, Hoss, Inc., Tacoma, WA
W.R. Coffin & Assoc., Appraiser, Redmond, WA
Ith, Boydston & Associates

Mineral Resources Assessment and Valuation

In association with several government agencies, private, and lending institution Real Estate Appraisers (MAI's), McLucas has completed many mineral land valuations (including estate valuations) of industrial mineral deposits (including sand & gravel and quarry rock) for government agencies, lending institutions, the U.S. Bankruptcy Court, and private mining companies and resource land owners. In the process, the full range of geologic, geophysical, and hydrogeologic exploration, market and royalty surveys, aerial photography, and computer-aided drafting services have been used. As a result, McLucas has become a unique specialist in this work in the northwest states. The most comprehensive project to date was commissioned in 1999 by Wilder Construction Company, which retained McLucas and W.R. Coffin, MAI, to determine the mineral value and reversionary land value for all 11 of the company's surface mines in Alaska and Washington. Granite Corporation, the largest road construction company in the U.S., invested in Wilder, partially on the basis of these valuations.

In the arena of highway condemnation cases, McLucas was fully involved as an expert witness for two sand & gravel mines in the Boise, Idaho area. This work resulted in awards to the miners of $2,700,000 and $1,000,000, respectively.

McLucas and Associates Qualifications

Clientele listed represent only a portion of the total project output of McLucas and Associates over the past 25 years. Most work was devoted to geologic, geophysical, and hydrogeologic exploration for determination of mineral reserves and quality; mine management; environmental assessment and remediation; mine and reclamation design; mine permit procurement; geologic reconnaissance of rock formations, containing decorative rock and dimension stone; and mineral economic valuations for clay, silica sand, quartz, limestone, sand and gravel, quarry rock, and other industrial mineral deposits in the states of Washington, Oregon, Idaho, Montana, Arizona, California, New Jersey, and Canada.

Clients for which McLucas has served as expert witness

Washington State Attorney General:
Department of Natural Resources
Washington Department of Transportation
Clallam County Public Works Department, highway condemnation, Port Angeles WA
Mark Maugeback, Prime Earth Mine highway condemnation case, Boise, Idaho
Idaho Sand and Gravel highway condemnation case, Boise, Idaho
City Transfer of Kent, Dieringer, Washington

Glennda McLucas-Taylor's professional experience

McLucas and Associates

4/81 to 6/86: Industrial Mineral Products, Ravensdale, WA
9/77 to 4/80: Washington State Geologic Survey

Education

B.S. Geology, 1971, Missouri School of Mines, Rolla & K.C., MO
M.S. Geology, 1977, University of Washington, Seattle, WA

Past Professional Society Affiliations

American Concrete Institute, Seattle Chapter
Washington Aggregate and Concrete Association
American Institute of Mining and Metallurgical Engineers

Professional Registration

Washington State Geologist License No. 678
Oregon Board of Geologist Registration No. G-834
Washington State Women's Business Enterprise, Registration No. W2S4817046

EXHIBIT #30

HEARING EXAMINER'S ORDER GRANTING APPEAL & REVERSING COUNTY'S DENIAL

BEFORE THE SKAGIT COUNTY HEARING EXAMINER

In the Matter of the Appeal of	)	
	)	
WILLIAM WOODING,	)	PL21-0421
	)	
Appellant,	)	**ORDER GRANTING APPEAL**
	)	
SKAGIT COUNTY,	)	
	)	
Respondent.	)	
	)	

This matter was presented through written submissions. Steven Taylor, Mining Consultant, represented the Appellant. Jason D'Avignon, Deputy Prosecuting Attorney, represented the County.

The appeal is of the County's denial of a Special Use Permit application to expand a gravel mine near Lake Erie. The denial was based on the Appellant's failure to provide a Geologically Hazardous Site Assessment within 120 days as provided by SCC 14.06.105(1).

FINDINGS

1. William Wooding filed Application No. PL16-0556 for a special use permit to expand his Lake Erie gravel mine on December 2, 2016, almost five years ago. In the interim substantial technical information has been submitted and reviewed. After a hearing on August 26 and October 14, 2020, the Hearing Examiner approved the application with conditions.

2. On appeal, the Board of County Commissioners remanded the matter to the Hearing Examiner to determine if a Geologically Hazardous Site Assessment is needed. The Hearing Examiner ordered Planning and Development Services (PDS) to direct Wooding to provide such an assessment.

3. The 120 days provided by SCC 14.06.105 for submittal of the information expired on July 21, 2021. On July 20, 2021, the day before the expiration date, Wooding's agent sent an email stating that a contract with a consultant had been entered and requesting a further extension of time for submitting the required information.

4. PDS denied the extension request and denied Wooding's special use permit application for failure to timely supply requested information.

5. In arguing on Wooding's behalf his consultant stated that he had been hospitalized three times in 2021 and that this had made it difficult for him to pursue the application.

6. He said that when the information was asked for in March of 2021, no one was available to provide the requested assessment. Thereafter, experts he consulted advised him that such an assessment would need to cover all of the seasons of the year. Another year was requested to complete the work.

7. Wooding's consultant further noted that the proposed mining would be conducted in phases with fill and replanting occurring after each phase, thus limiting the open areas of the mine and controlling surface water absorption. He explained that the purpose was for a gradual expansion of the mine, not an increase in production.

8. He also noted that six reports referencing the hydrology of the site have already been produced, supporting the conclusion that the site has no perched aquifers and that the groundwater flow is to the northeast.

9. The County simply stated that their denial was based on a failure to supply requested information within the time allowed under SCC 14.06.105(1). The County emphasized that the denial could have been avoided by a timely request for extension and that no such request was timely made.

10. Any conclusion herein which may be deemed a finding is hereby adopted as such.

DISCUSSION

This case is a classic example of "coming to a nuisance," where the character of an area has been changed by recent development that is arguably at odds with the traditional allowed land use. Under this circumstance the historic use is not required to cease.

Continuation of the mining operation near Lake Erie is not now subject to any explicit regulatory oversight. Significantly, no reclamation program presently governs the operation.

Allowing the mining to proceed essentially unregulated presents obvious risks. The issuance of a Special Use Permit for the mine would lead to resolution of presently unanswered questions about what is to occur in the future. The answers would essentially remove environmental concerns about the end state of the property.

If the preparation of a Geologically Hazardous Site Assessment reveals risks that need to be and can be addressed, the applicant can do so in prosecuting his permit. If the assessment reveals risks that cannot be avoided, then the permit can be denied.

Given the amount of time and effort that has been expended on this application and the large amount of information that has been generated, it seems unnecessarily punitive to require the applicant to submit a new application.

CONCLUSIONS OF LAW

1. The Hearing Examiner has jurisdiction over this appeal. SCC 14.16.050(1)(a).

2. A dismissal for failure to meet the 120 day time limit for submitting additional information is explicitly made appealable by SCC 14.06.105(3). This must mean that a compelling explanation can excuse the lateness.

3. The Examiner is persuaded that such an explanation has been provided in this case and concludes that the time limit should be extended as set forth in the Order below.

ORDER

The denial of Application No. PL16-0556 is reversed. The application shall remain in good standing through September 2022. During this time the Applicant shall have a Geologically Hazardous Site Assessment prepared and shall submit the same prior to the end of September 2022.

SO ORDERED, this __15th___, day of October, 2021.

Wick Dufford

Wick Dufford, Hearing Examiner

Transmitted to: Interested parties on October __18th___, 2021.

EXHIBIT #31

GEOLOGIC HAZARD SITE ASSESSMENT

(RECEIVED AUGUST 12, 2022)

Geologic Hazard Site Assessment

Lake Erie Pit 1 Expansion
Southeast corner of Rosario Road & Marine Drive
Project # PS2220529-0

Prepared for:

Lake Erie Trucking, LLC
13540 Rosario Road, Anacortes, WA 98221

August 11, 2022

Geologic Hazard Site Assessment

Lake Erie Pit 1 Expansion
Southeast corner of Rosario Road & Marine Drive
Project # PS2220529-0

Prepared for:

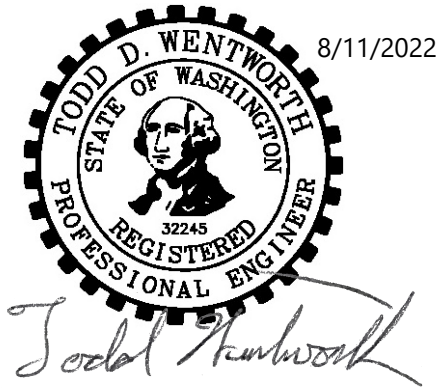
Lake Erie Trucking, LLC
13540 Rosario Road, Anacortes, WA 98221

Prepared by:

Wood Environment & Infrastructure Solutions, Inc.
4020 Lake Washington Blvd NE, Suite 200
Kirkland, Washington 98033
USA
T: 425-368-1000

August 11, 2022

Wood Environment & Infrastructure Solutions, Inc.



8/11/2022

Todd D. Wentworth, P.E., L.G.
Principal Geotechnical Engineer

Milan Radic, P.E.
Senior Geotechnical Engineer

Table of contents

1.0 Introduction 1
2.0 Site and project description 1
2.1 Site Reconnaissance 1
2.2 Site Research 2
3.0 Subsurface Conditions 2
3.1 Geologic Conditions 2
3.2 Groundwater Conditions 3
4.0 Slope Stability 3
4.1 Soil Strength Parameters 3
4.2 Slope Stability Analyses 4
4.3 Coastal Bluffs 5
5.0 Conclusions and recommendations 6
6.0 Limitations 6
7.0 References 9

List of figures

Figure 1 Site Vicinity
Figure 2 Plan View of Expansion Area with Cross Section Locations
Figure 3 West Slope Cross Section A–A'
Figure 4 East Slope Cross Section A–A'
Figure 5 South Slope Cross Section B–B'
Figure 6 LIDAR Map

List of tables

Table 1. Correlated Soil Strength Properties 4
Table 2. Overall Stability Evaluation Results 5

List of appendices

Appendix A Site Photographs
Appendix B Slope Stability Output Exhibits

List of acronyms

FS	factor of safety
msl	mean sea level
Wood	Wood Environment and Infrastructure Solutions, Inc.

1.0 Introduction

Wood Environment and Infrastructure Solutions, Inc. (Wood) understands that Lake Erie Trucking, LLC is seeking a permit to expand operations of the Lake Erie Pit 1 gravel mine towards the south. The expansion area includes tax parcels: P19161, P19164, P19158, P90028, and P19155. The goal is to gain access to more resources in order to continue mine operations further into the future. Various studies have been competed already as part of the permitting process (Skagit County 2020). A Special Use Permit was approved by Skagit County on November 30, 2020 (Skagit County, 2020); however, upon appeal, the Hearing Examiner determined that a geologic hazard site assessment is needed in order to fulfill Section 14.24.400 of the Skagit County Critical Areas Ordinance (Skagit County, 2021). This report is intended to meet the requirement for a geologic hazard site assessment.

2.0 Site and project description

The site is located on Fidalgo Island just south of Lake Erie, near 13500 Rosario Road, Township 34 North, Range 1 East, Section 11, Northwest ¼, as shown on Figure 1. The site contains a local high point in elevation between the coastline of Burrows Bay to the northwest, Lake Erie to the northeast, and Devil's Elbow Lake to the south. The surface elevation ranges from 420 feet down to 290 feet above mean sea level (msl) at the current base of mining operations. The surface slopes moderately over most of the area, except where mining excavations have created near-vertical and very steep slopes. The proposed expansion area has been graded with access roads and small excavations for mining aggregates and for controlling surface water runoff.

The current mining area is bare or vegetated with pioneering grasses, bushes, and saplings, and the proposed expansion area is fully vegetated with second-growth trees and shrubs.

The proposed use of the expansion area is displayed in Figures 2 through 5. Dry mining will consist of excavating the bank run sand and gravel, loading it into trucks, and transporting to construction sites. Excavation could extend down to elevation 250 feet above msl. The final reclamation plan consists of backfilling the excavated bank to form a prism of fill with 2H:1V (horizontal:vertical) slopes, and backfilling excavations in the northern portion to raise grades and form 2H:1V fill slopes, as shown in Figures 3 through 5.

2.1 Site Reconnaissance

Wood visited the site March 18, 2022. We met with Brandt Wooding of Lake Erie Trucking, LLC, who gave us a tour of the Lake Erie Pit 1 and answered questions. The photographs in Appendix A were taken during the site visit.

There were no ongoing operations occurring at Pit 1 and there was no evidence of recent mining (grass and shrubs were encroaching onto the access roads). First, Wood visited the most recent mining area of Pit 1, accessed from Rosario Road on the north near Marine Drive. The excavated sidewalls of Pit 1 were near-vertical for the upper 30 feet, and sloughed soil formed steep slopes of about 1.3H:1V down to the level base of Pit 1 (see photographs 1 through 3 in Appendix A).

The upper slope exposed on the east side appeared to consist of glacial till because the soil was able to stand vertical and consisted of a well-graded mixture of grain sizes with a large percentage of fines (silt and clay). The south and east sidewalls of Pit 1 appeared to consist of advance outwash because the soil was also able to stand vertical and stratification of sand was clearly visible (the grain sizes were stratified into thin layers).

No groundwater seepage was observed through the excavated slopes and no evidence of significant erosion was observed.

Second-growth vegetation of young conifers and deciduous trees and shrubs surrounded the Pit 1 mining area, both directly at the top of the cut slopes and forming a buffer to the north between the excavation area and Rosario Road.

Wood also visited the proposed expansion area to the south of the existing Pit 1 via an access road from Rosario Road on the west near Edith Point Road. This area was less developed, with some grading for access roads, and ditches and stormwater ponds for drainage and erosion control. Minor excavations for mining gravel may have occurred in the past. Wood observed monitoring well BJF-103, recently installed for the hydrogeologic studies related to the permit application for the expansion (see Photograph 4 in Appendix A). The surface of the expansion area slopes gently to moderately (less than 40 percent) from a high point near the middle of the area to the south, west, and east. Most of the expansion area is well-vegetated with second growth trees and brush. We did not notice any signs of slope instability or significant erosion.

2.2 Site Research

Wood reviewed previous relevant studies of the site. The following documents provided information on the existing conditions, site geology and groundwater, the proposed expansion, and the final reclamation plan:

- Lake Erie Pit Well Reconnaissance (NWGC, 2019);
- Observation Well Installation (Maul Foster, 2017); and
- Hydrogeologic Site Assessment Report (Maul Foster, 2016).

Wood also reviewed the Skagit County LIDAR map created using Lidar2016Hillshade encompassing the site, which is reproduced as Figure 6. The map clearly depicts evidence of landslides along the coastal bluffs west of the site and grading due to the mining on the site. The head scarp of the nearest coastal bluff is approximately 300 feet northwest of the northwest sidewall of the existing Pit 1 and is approximately 800 feet northwest of the proposed expansion. Rosario Road runs between the site and the coastal bluffs, and the cut slope between Rosario Road and the site is clearly visible. The cut slope graded for Rosario Road is not considered a geologic hazard as it is not a natural slope but is an engineered and maintained slope.

3.0 Subsurface Conditions

The subsurface conditions at the site have been described thoroughly in the previous hydrogeologic studies (Maul Foster, 2016 and 2017; and NWGC, 2019). The conditions are summarized in this section and incorporated into our slope stability modeling in Section 4.0.

3.1 Geologic Conditions

Based on available published maps, the geology of the site generally consists of glacial till overlying glacial advance outwash soils. Ophiolite rock outcrops are present nearby to the north and east, and are probably present below the glacial soils at an undetermined depth (Miller and Pessel, 1986).

The mapped geology is consistent with the well drilling observations (Maul Foster, 2017) which interpreted the soil stratigraphy to consist of glacial till in the upper 35 feet below ground surface), overlying glacial advance outwash to the full depth of drilling of 277 feet below ground surface.

Additionally, Wood observed glacial till and advance outwash in the mining sidewalls during our site reconnaissance, confirming the mapped stratigraphy.

Glacial till is generally defined as an over-consolidated mixture of gravel, sand, silt, and clay that was deposited and overridden by a prehistoric glacial ice mass, thereby over-consolidating the soils to densities ranging from dense to very dense. Thus, these materials possess relatively high shear strengths, low compressibility, and low permeability.

Advance outwash is characterized by moderately sorted sands and gravels deposited by streams associated with the advancing glacier. Advance outwash, deposited in front of the advancing glacial ice mass, has been compacted (over-consolidated) by the overriding glacier resulting in dense to very dense deposits and is found below glacial till.

A relatively thin layer of glacial lacustrine soils was encountered near elevation 250 feet above msl while drilling observation well BJF-103. Glacial lacustrine soils form when sediments are deposited in lakes in front of advancing glaciers and then overridden by the glacier, resulting in very stiff to hard deposits of silt, fine sand, and clay.

3.2 Groundwater Conditions

The previous hydrogeologic studies (Maul Foster, 2016 and 2017; and NWGC, 2019) provide detailed information regarding the groundwater elevation, groundwater flow direction, and conclude that the mining operation is unlikely to have any impact on the groundwater.

To summarize, the regional unconfined groundwater table was interpreted to be near elevation 190 feet above msl, which is approximately 60 feet below the proposed mining excavation level. Groundwater flows north, toward Lake Erie, as shown in Figure 2. Due to concerns that Devil's Elbow Lake (elevation 363 feet above msl) could be a source of water seepage into the Pit 1 sidewalls, a groundwater observation well , BJF-103, was installed in the proposed expansion area, between the existing gravel pit and Devil's Elbow Lake (Figure 2). Only the deep regional groundwater at elevation 190 feet above msl was encountered and no evidence of shallower groundwater was found.

The previous hydrogeologic studies concluded that the proposed mine operations and reclamation plan would not affect the water levels in Devil's Elbow Lake. Additionally, because there will be no groundwater withdrawals and stormwater will infiltrate into the subsurface, there will be no impact on the downgradient groundwater conditions.

4.0 Slope Stability

Because the site has relatively steep slopes (50 percent grades), we analyzed the slope stability for these site conditions. The following sections describe results of geotechnical engineering analyses for the proposed reclaimed slopes. The analytical models are based on the slopes presented in the Hydrogeologic Site Assessment Report (Maul Foster, 2016) as cross sections A–A' and B–B', and Wood's interpretation of the soil stratigraphy and strengths. The soil stratigraphy is based on the updated cross section B–B' presented in the observation well installation letter (Maul Foster, 2017), which included the soils log for observation well BJF-103. The interpreted geologic cross sections are presented in Figures 3 through 5.

4.1 Soil Strength Parameters

Table 1 presents the interpretation of geological units (supplied by Maul Foster [2016]), and correlated soil properties selected from the range provided in Engineering Geology in Washington (Koloski et al., 1989). For the fill to be used to create the final reclaimed slopes, we assumed Common Borrow per

Washington State Department of Transportation (WSDOT) Standard Specification 9-03.14(3) (WSDOT, 2022a) would be applicable, and the soil strength properties for the Common Borrow were correlated with Table 5-2 in the *Geotechnical Design Manual* (WSDOT, 2022b).

Table 1. Correlated Soil Strength Properties

Material	USCS Soil Type	Soil Friction Angle (degrees)	Cohesion (psf)	Apparent Cohesion[1] (psf)	Moist Unit Weight (pcf)
Common Borrow	SM, GM	34	0	100	125
Glacial Outwash	SW, GW	38	0	200	130
Glacial Lacustrine	ML, SM	32	200	0	120

Note:
1. Apparent cohesion used only to evaluate stability for the seismic pseudostatic case.
Abbreviations
pcf = pounds per cubic foot USCS = Unified Soil Classification System
psf = pounds per square foot

By modeling the existing slope conditions at cross section A–A', Wood back-calculated soil properties of the advance outwash, a dominant soil unit, to match a factor of safety 1.0 under current static condition. The resulting soil strength required a friction angle of 42 degrees and 200 pounds per square foot apparent cohesion. These values are plausible but rather high, so to be more conservative, Wood reduced the soil strength of the advance outwash to correlated values reported in Engineering Geology in Washington (Koloski et al., 1989).

4.2 Slope Stability Analyses

Wood performed two-dimensional, limit equilibrium overall (global) stability analyses based on the method of slices according to Morgenstern-Price method, using the Slope/W software module in GeoStudio 2016 (Geo-Slope, 2016). This program employs limit equilibrium methods widely used in geotechnical engineering practice.

Wood modeled critical cross sections for slope geometry as summarized below:

1. Cross section A–A' (west to east) current west slope condition, Static Case;
2. Cross section A–A' (west to east) 2H:1V reclaimed west slope condition, Static Case;
3. Cross section A–A' (west to east) 2H:1V reclaimed west slope condition, Pseudostatic Case;
4. Cross section A–A' (west to east) reclaimed east slope condition, Static Case;
5. Cross section A–A' (west to east) reclaimed east slope condition, Pseudostatic Case;
6. Cross section B–B' (north to south) reclaimed south slope condition, Static Case; and
7. Cross section B–B' (north to south) reclaimed south slope condition, Pseudostatic Case.

We selected a target factor of safety (FS) for static and pseudo-static conditions of 1.3 and 1.1, respectively, for slip surfaces anywhere near the slope (no designated buffer) to verify the stability of the proposed final slopes. The static FS of 1.3 is what WSDOT uses for embankment and cut slopes that are not supporting structures. WSDOT does not require slopes without structures to be stable under seismic conditions, but they use an FS of 1.1 for slope that support structures.

Relative to the proposed 50-foot buffer between the top of the final slopes and the property line, all of the models for potential slip surfaces behind the buffer resulted in an FS greater than the 1.5 for static and 1.25 for seismic, as required by the Skagit County Critical Areas Code.

Global stability analyses of the reclaimed slopes considered shallow slip surfaces as well as deep-seated slip surfaces penetrating below the weaker glacial lacustrine layer and the groundwater table, defined at elevation 190 feet above msl per the previous hydrogeologic studies (Maul Foster, 2016 and 2017; and NWGC, 2019). The broad range cases demonstrate that deep-seated landslides are not likely.

Wood determined a pseudo-static horizontal seismic acceleration equivalent to one-half of site adjusted peak ground acceleration based on 7 percent probability of exceedance in 75 years, accessed via BEToolbox (WSDOT, 2022c). The pseudo-static horizontal seismic acceleration is 0.22g.

The results are presented in Table 2 and shows that reclaimed slopes meet or exceed the target FS. Slope stability results are shown in Appendix B.

Table 2. Overall Stability Evaluation Results

Cross Section	Location	Condition	Case	Target FS	Calculated FS	Exhibit[1]
A–A′	West Slope	Current[2]	Static	1.0	1.0	B.1
A–A′	West Slope	Reclaimed	Static	1.3	1.9	B.2
			Static – Broad Range		1.9	B.3
			Pseudo Static	1.1	1.3	B.4
			Pseudo Static – Broad Range		1.3	B.5
A–A′	East Slope	Reclaimed	Static	1.3	1.4	B.6
			Static – Broad Range		1.4	B.7
			Pseudo Static	1.1	1.1	B.8
			Pseudo Static – Broad Range		1.1	B.9
B–B′	South Slope	Reclaimed	Static	1.3	1.7	B.10
			Static – Broad Range		1.7	B.11
			Pseudo Static	1.1	1.3	B.12
			Pseudo Static – Broad Range		1.3	B.13

Note:
1. Exhibits can be found in Appendix B.
2. Model used to back-calculate soil strength of glacial outwash
Abbreviations:
FS = factor of safety

4.3 Coastal Bluffs

The proposed mining operations will not have any impact on the coastal bluffs because the excavations will be too far away (300 to 800 feet).

The instability of coastal bluffs is usually related to (listed from major to minor causation): over-steepened slope; waves eroding the toe and creating over-steepened slopes; erosion from surface water flowing over

the slopes; groundwater seepage through the face of the slope; and occasionally due to over-loading at the top of the slope (such as roads and buildings).

The site is too far away from the coastal bluffs to cause any changes in these conditions except for possibly groundwater seepage and the previous hydrogeologic studies for the site (Maul Foster, 2016 and 2017; and NWGC, 2019) addressed this possibility. The studies concluded the proposed site development will not impact the groundwater table or the stability of the coastal bluffs because groundwater flows from the site towards the northeast, away from the bluffs; excavations at the site will not extend down into the groundwater table; and stormwater will be managed and infiltrated on site.

5.0 Conclusions and recommendations

The geologically hazardous areas on the site consist of landslide hazards due to slopes steeper than 40 percent and higher than 10 feet. These slopes are present due to the mining excavations and the final mine reclamation will include slopes graded to 2H:1V (50 percent). Quantitative engineering analyses of these slopes has determined that they will be stable with FSs that meet the Skagit County critical area code requirements and the standard of engineering practice.

Adjacent to the west of the site is the road cut for Rosario Road, which is steeper than 40 percent and higher than 10 feet. However, this is an engineered slope that was designed and is maintained by Skagit County, and therefore is considered stable. Additionally, the proposed expansion of Pit 1 will not affect this slope.

Coastal bluffs are located 300 to 800 feet west of the site and the proposed expansion of Pit 1 will not affect these slopes, because the proposed expansion plans will not change the regional groundwater conditions.

6.0 Limitations

1. The work performed in the preparation of this report and the conclusions presented herein are subject to the following:
    a. The contract between Wood and the Client, including any subsequent written amendment or Change Order duly signed by the parties (hereinafter together referred as the "Contract");
    b. Any and all time, budgetary, access and/or site disturbance, risk management preferences, constraints or restrictions as described in the Contract, in this report, or in any subsequent communication sent by Wood to the Client in connection to the Contract; and
    c. The limitations stated herein.
2. ***Standard of care:*** Wood has prepared this report in a manner consistent with the level of skill and care ordinarily exercised by reputable members of Wood's profession, practicing in the same or similar locality at the time of performance, and subject to the time limits and physical constraints applicable to the scope of work, and terms and conditions for this assignment. No other warranty, guaranty, or representation, expressed or implied, is made or intended in this report, or in any other communication (oral or written) related to this project. The same are specifically disclaimed, including the implied warranties of merchantability and fitness for a particular purpose.
3. ***Limited locations:*** The information contained in this report is restricted to the site and structures evaluated by Wood and to the topics specifically discussed in it, and is not applicable to any other aspects, areas, or locations.

4. ***Information utilized:*** The information, conclusions, and estimates contained in this report are based exclusively on: i) information available at the time of preparation, ii) the accuracy and completeness of data supplied by the Client or by third parties as instructed by the Client, and iii) the assumptions, conditions and qualifications/limitations set forth in this report.
5. ***Accuracy of information:*** No attempt has been made to verify the accuracy of any information provided by the Client or third parties, except as specifically stated in this report (hereinafter "Supplied Data"). Wood cannot be held responsible for any loss or damage, of either contractual or extra-contractual nature, resulting from conclusions that are based on reliance on the Supplied Data.
6. ***Report interpretation:*** This report must be read and interpreted in its entirety, as some sections could be inaccurately interpreted when taken individually or out of context. The contents of this report are based on the conditions known and information provided as of the date of preparation. The text of the final version of this report supersedes any other previous versions produced by Wood.
7. ***No legal representations:*** Wood makes no representations whatsoever concerning the legal significance of its findings, or as to other legal matters touched on in this report, including but not limited to ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and change. Such interpretations and regulatory changes should be reviewed with legal counsel.
8. ***Decrease in property value:*** Wood shall not be responsible for any decrease, real or perceived, of the property or site's value or failure to complete a transaction, as a consequence of the information contained in this report.
9. ***No third-party reliance:*** This report is for the sole use of the party to whom it is addressed unless expressly stated otherwise in the report or Contract. Any use or reproduction that any third party makes of the report, in whole or in part, or any reliance thereon or decisions made based on any information or conclusions in the report is the sole responsibility of such third party. Wood does not represent or warrant the accuracy, completeness, merchantability, fitness for purpose, or usefulness of this document, or any information contained in this document, for use or consideration by any third party. Wood accepts no responsibility whatsoever for damages or loss of any nature or kind suffered by any such third party as a result of actions taken or not taken or decisions made in reliance on this report or anything set out therein. including without limitation, any indirect, special, incidental, punitive or consequential loss, liability or damage of any kind.
10. ***Assumptions:*** Where design recommendations are given in this report, they apply only if the project contemplated by the Client is constructed substantially in accordance with the details stated in this report. It is the sole responsibility of the Client to provide to Wood changes made in the project, including but not limited to details in the design, conditions, engineering, or construction that could in any manner whatsoever impact the validity of the recommendations made in the report. Wood shall be entitled to additional compensation from Client to review and assess the effect of such changes to the project.
11. ***Time dependence:*** If the project contemplated by the Client is not undertaken within a period of 18 months following the submission of this report, or within the time frame understood by Wood to be contemplated by the Client at the commencement of Wood's assignment, and/or if any changes are made—for example, to the elevation, design or nature of any development on the site, its size and configuration, the location of any development on the site and its orientation, the use of the site, performance criteria, and the location of any physical infrastructure—the conclusions and recommendations presented herein should not be considered valid unless the impact of the said

changes is evaluated by Wood, and the conclusions of the report are amended or are validated in writing accordingly.

Advancements in the practice of geotechnical engineering, engineering geology and hydrogeology and changes in applicable regulations, standards, codes, or criteria could impact the contents of the report, in which case, a supplementary report may be required. The requirements for such a review remain the sole responsibility of the Client or their agents.

Wood will not be liable to update or revise the report to take into account any events or emergent circumstances or facts occurring or becoming apparent after the date of the report.

12. ***Limitations of visual inspections:*** Where conclusions and recommendations are given based on a visual inspection conducted by Wood, they relate only to the natural or man-made structures, slopes, etc. inspected at the time the site visit was performed. These conclusions cannot and are not extended to include those portions of the site or structures that were not reasonably available, in Wood's opinion, for direct observation.

13. ***Limitations of site investigations:*** Site exploration identifies specific subsurface conditions only at those points from which samples have been taken and only at the time of the site investigation. Site investigation programs are a professional estimate of the scope of investigation required to provide a general profile of subsurface conditions.

    The data derived from the site investigation program and subsequent laboratory testing are interpreted by trained personnel and extrapolated across the site to form an inferred geological representation, and an engineering opinion is rendered about overall subsurface conditions and their likely behavior with regard to the proposed development. Despite this investigation, conditions between and beyond the borehole/test hole locations may differ from those encountered at the borehole/test hole locations and the actual conditions at the site might differ from those inferred to exist, since no subsurface exploration program, no matter how comprehensive, can reveal all subsurface details and anomalies.

    Final sub-surface/bore/profile logs are developed by geotechnical engineers based on their interpretation of field logs and laboratory evaluation of field samples. Customarily, only the final bore/profile logs are included in geotechnical engineering reports.

    Bedrock, soil properties, and groundwater conditions can be significantly altered by environmental remediation and/or construction activities, such as the use of heavy equipment or machinery, excavation, blasting, pile-driving, or draining or other activities conducted either directly on site or on adjacent terrain. These properties can also be indirectly affected by exposure to unfavorable natural events or weather conditions, including freezing, drought, precipitation, and snowmelt.

    During construction, excavation is frequently undertaken that exposes the actual subsurface and groundwater conditions between and beyond the test locations, which may differ from those encountered at the test locations. It is recommended that Wood be retained during construction to confirm that the subsurface conditions throughout the site do not deviate materially from those encountered at the test locations, that construction work has no negative impact on the geotechnical aspects of the design, to adjust recommendations in accordance with conditions as additional site information is gained, and to deal quickly with geotechnical considerations if they arise.

    Interpretations and recommendations presented herein may not be valid if an adequate level of review or inspection by Wood is not provided during construction.

14. ***Factors that may affect construction methods, costs and scheduling:*** The performance of rock and soil materials during construction is greatly influenced by the means and methods of construction.

Where comments are made relating to possible methods of construction, construction costs, construction techniques, sequencing, equipment or scheduling, they are intended only for the guidance of the project design professionals, and those responsible for construction monitoring. The number of test holes may not be sufficient to determine the local underground conditions between test locations that may affect construction costs, construction techniques, sequencing, equipment, scheduling, operational planning, etc.

Any contractors bidding on or undertaking the works should draw their own conclusions as to how the subsurface and groundwater conditions may affect their work, based on their own investigations and interpretations of the factual soil data, groundwater observations, and other factual information.

15. ***Groundwater and dewatering:*** Wood will accept no responsibility for the effects of drainage and/or dewatering measures if Wood has not been specifically consulted and involved in the design and monitoring of the drainage and/or dewatering system.
16. ***Environmental and hazardous materials aspects:*** Unless otherwise stated, the information contained in this report in no way reflects on the environmental aspects of this project, since this aspect is beyond the scope of work and the Contract. Unless expressly included in the scope of work, this report specifically excludes the identification or interpretation of environmental conditions such as contamination, hazardous materials, wildlife conditions, rare plants, or archeology conditions that may affect use or design at the site. This report specifically excludes the investigation, detection, prevention, or assessment of conditions that can contribute to moisture, mold or other microbial contaminant growth, and/or other moisture-related deterioration, such as corrosion, decay, or rot in buildings or their surroundings. Any statements in this report or on the boring logs regarding odors, colors, and unusual or suspicious items or conditions are strictly for informational purposes.
17. ***Effect of iron minerals:*** This report does not address issues related to the discovery or presence of iron minerals, such as pyrite, or the effects of iron minerals, if any, in the soil or to be used in concrete. Should specific information be required, additional testing may be requested by the Client for which Wood shall be entitled to additional compensation.

7.0 References

Geo-Slope International, Ltd. (Geo-Slope). 2016. GeoStudio 2016 (v8.16.5.15361).

Koloski, J.W., S.D. Schwartz, and D.W. Tubbs. 1989. Geotechnical Properties of Geologic Materials. *In* Engineering Geology in Washington, Volume I, Richard W. Galster, Editor, Washington Division of Geology and Earth Resources *Bulletin* 78.

Maul Foster & Alongi, Inc. (Maul Foster). 2016. Hydrogeologic Site Assessment Report, Lake Erie Pit Expansion. September 28.

Maul Foster. 2017. Observation Well Installation, Lake Erie Pit Expansion. September 28.

Miller, R.D. and F. Pessel, Jr. 1986. Map showing unconsolidated deposits grouped on the basis of texture, Port Townsend 30' x 60' Quadrangle, Puget Sound Region, Washington. USGS Miscellaneous Investigation Series, Map I-1198-D, Scale 1:100,000.

Northwest Groundwater Consultants, LLC (NWGC). 2019. Lake Erie Pit Well Reconnaissance. March 11.

Skagit County. 2020. Notice of Decision: Special Use Permit, PL16-0556. November 30. Available at: www.skagitcounty.net/hearingexaminer.

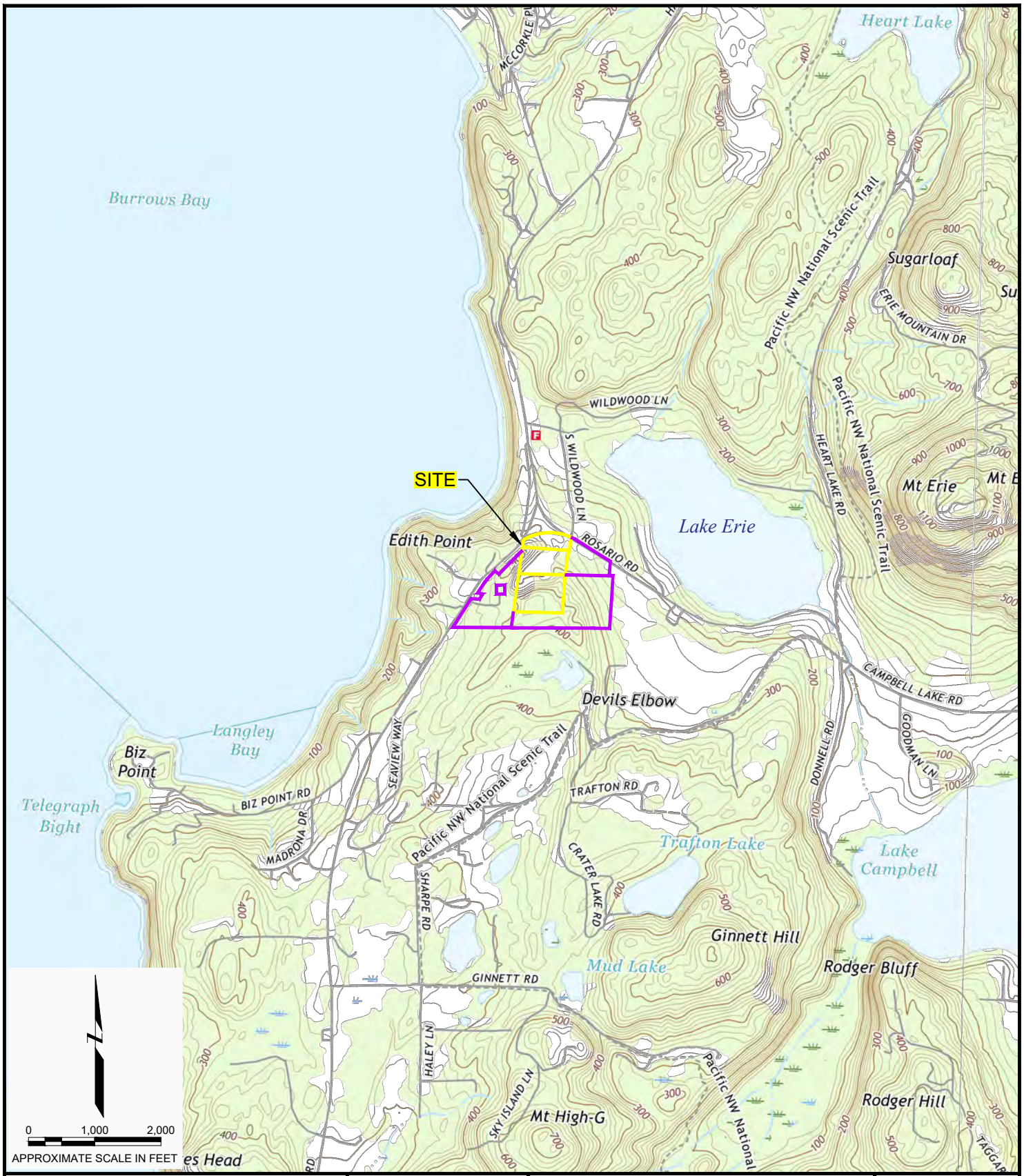
Skagit County. 2021. Order Granting Appeal: PL21-0421, Before the Skagit County Hearing Examiner. October 18.

Washington State Department of Transportation (WSDOT). 2022a. *Standard Specifications for Road, Bridge, and Municipal Construction.* Publication M 41-10.

WSDOT. 2022b. *Geotechnical Design Manual*. Publication M 46-03.16. February.

WSDOT. 2022c. Bridge Engineering Software – BEToolbox,. Available at: https://wsdot.wa.gov/eesc/bridge/software/index.cfm?fuseaction=software_detail&software_id=44.

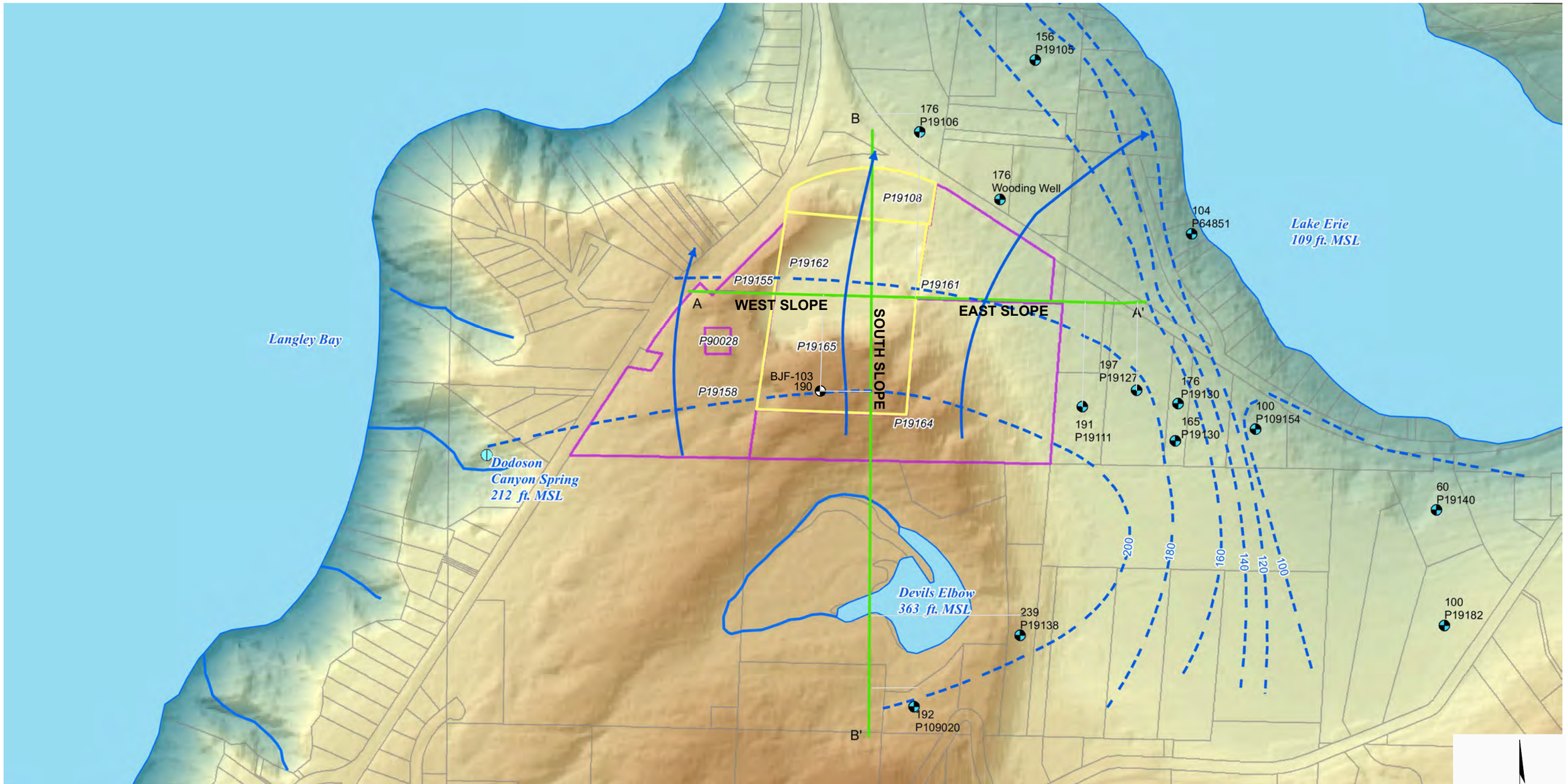
Figures



CLIENT LAKE ERIE TRUCKING, LLC		PROJECT LAKE ERIE PIT 1 EXPANSION Anacortes, Washington	DATE MAY 2022
			SCALE AS SHOWN
Wood Environment & Infrastructure Solutions, Inc. 4020 Lake Washington Blvd NE, Suite 200 Kirkland, Washington 98033	wood.	TITLE SITE VICINITY	PROJECT NO. PS22-20529-0
			FIGURE 1

DRAWN BY: APS CHECKED BY: JKH

C:\Users\adam.stenberg\OneDrive - Wood PLC\Wood\PS22205290\LakeEriePit_SlopeStabilityFigures_040822.dwg - Vicinity - May. 06, 2022 11:55am - adam.stenberg



Legend

- Inferred Groundwater Surface Elevation Contour (MSL)
- Inferred Groundwater Flow Direction
- Parcel #
- MSL Well
- *Approximate Groundwater Elevation (MSL)*
- Cross Section Transect
- Current Permitted Parcels
- Expansion Parcels
- Parcels

Elevation (Feet MSL)

High : 1270.8

Low : -6.7

0 250 500

APPROXIMATE SCALE IN FEET

SOURCE:
HYDROGEOLOGIC SITE ASSESSMENT REPORT

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

DRAWN BY: PM CHECKED BY: JKH

C:\Users\adam.stenberg\OneDrive - Wood PLC\Wood\PS22205290\LakeEriePit_SlopeStabilityFigures_040822.dwg - PlanView - May. 06, 2022 12:13pm - adam.stenberg

CLIENT
LAKE ERIE TRUCKING, LLC

Wood
Environment & Infrastructure Solutions, Inc.
4020 Lake Washington Blvd NE, Suite 200
Kirkland, Washington 98033

wood.

PROJECT
LAKE ERIE PIT PIT 1 EXPANSION
Anacortes, Washington

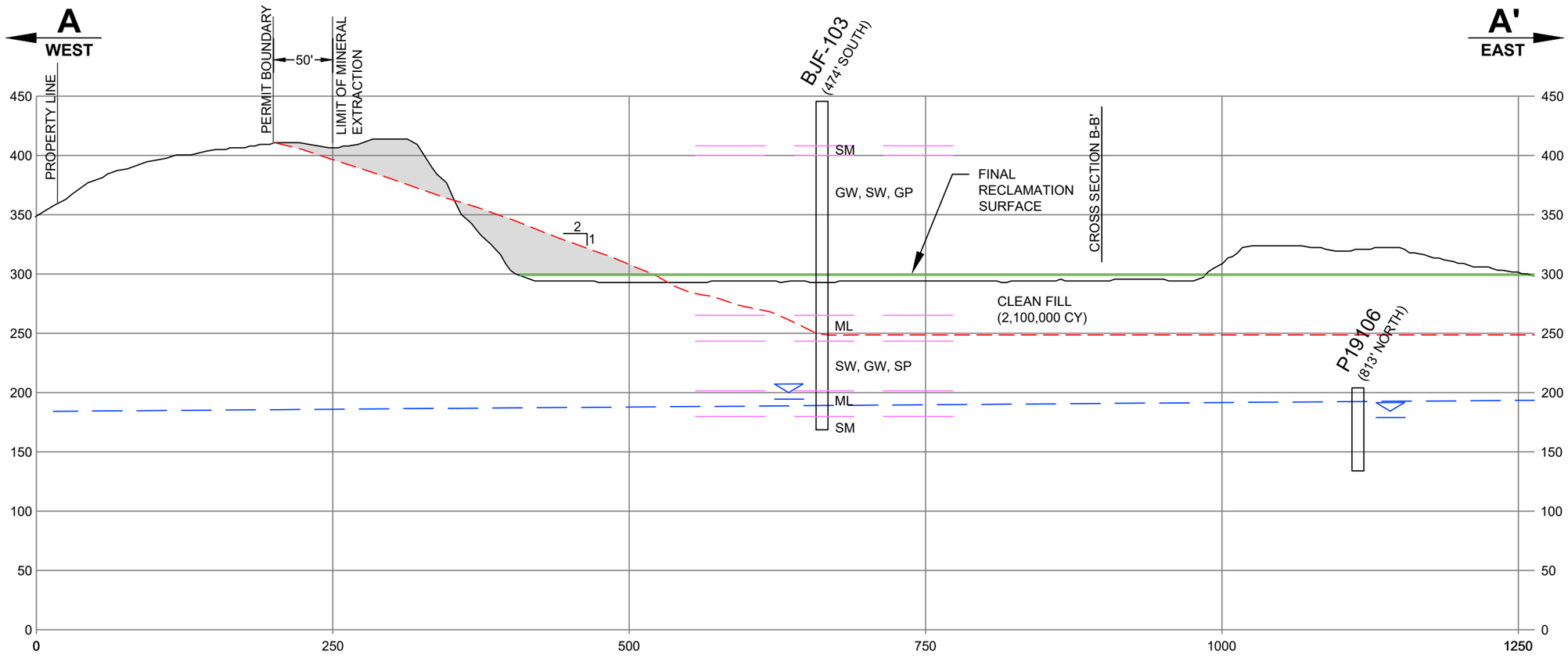
TITLE
PLAN VIEW OF EXPANSION AREA WITH CROSS SECTION LOCATIONS

DATE
MAY 2022

SCALE
AS SHOWN

PROJECT NO.
PS22-20529-0

FIGURE
2

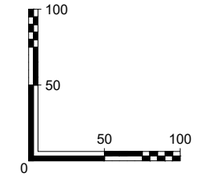


KEY

CL = CLAY
GC = CLAYEY GRAVEL
SC = CLAYEY SAND
SM = SILTY SAND
SW = WELL GRADED SAND
GW = WELL GRADED GRAVEL
ML = SILT
SP = POORLY GRADED SAND

LEGEND

EXISTING GRADE
FINAL RECLAMATION SURFACE
BOTTOM OF MINING SURFACE
LITHOLOGY CONTACT
AREA TO BE REGRADED AT FINAL RECLAMATION
INFERRED WATER TABLE



APPROXIMATE SCALE IN FEET

NOTES:

1. 100-FT SETBACK TO FINAL RECLAMATION SURFACE IS ONLY APPLICABLE TO PARCEL 19108. ALL OTHER PARCELS WILL MAINTAIN A 50-FT SETBACK TO FINAL RECLAMATION SURFACE.
2. MINE TO 10 FEET ABOVE WATER TABLE
3. MINE FLOOR RAISED TO 300 FEET WITH 85% COMPACTION
4. MSL = MEAN SEA LEVEL
5. CY = CUBIC YARDS

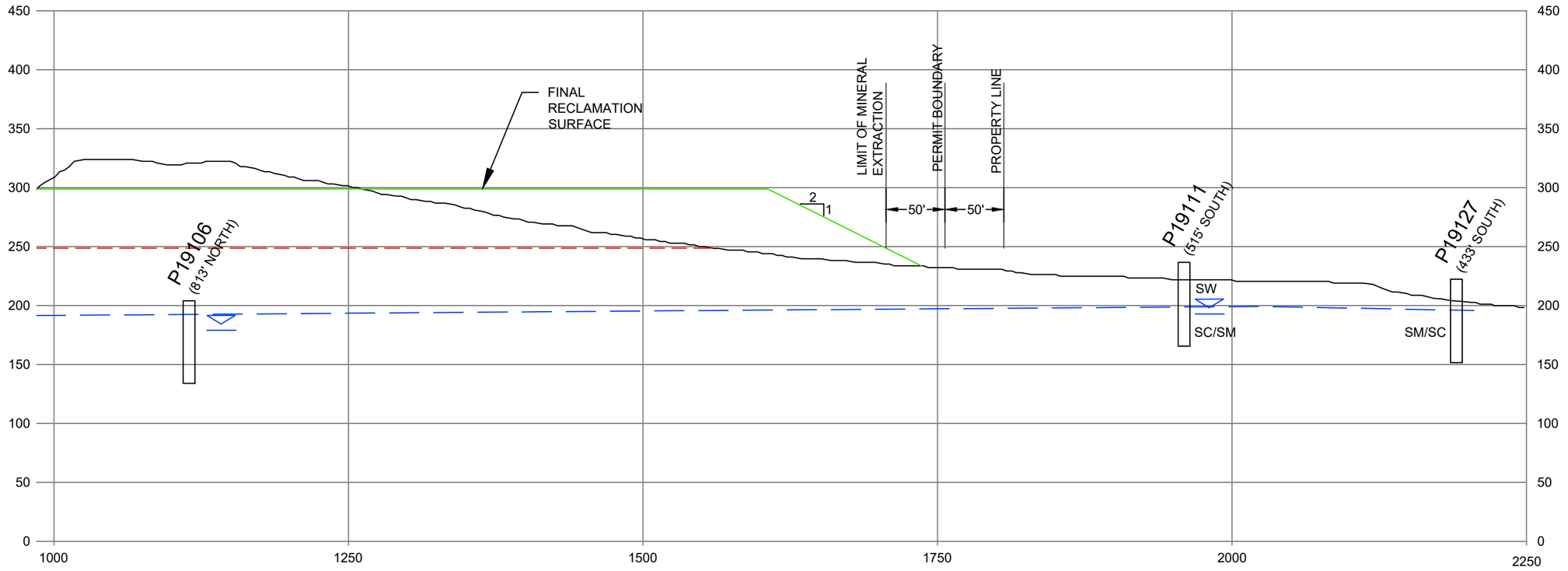
SOURCE:
HYDROGEOLOGIC SITE ASSESSMENT REPORT

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

DRAWN BY: PM CHECKED BY: JKH

CLIENT: LAKE ERIE TRUCKING, LLC	wood.	PROJECT: LAKE ERIE PIT PIT 1 EXPANSION Anacortes, Washington	DATE: MAY 2022
			SCALE: AS SHOWN
Wood Environment & Infrastructure Solutions, Inc. 4020 Lake Washington Blvd NE, Suite 200 Kirkland, Washington 98033		TITLE: WEST SLOPE CROSS SECTION A-A'	PROJECT NO.: PS22-20529-0
			FIGURE: 3

C:\Users\adam.stenberg\OneDrive - Wood PLC\Wood\PS22205290\LakeEriePit_SlopeStabilityFigures_040822.dwg - WestSlope - May, 06, 2022 12:15pm - adam.stenberg

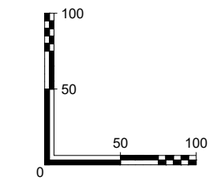


KEY

CL = CLAY
GC = CLAYEY GRAVEL
SC = CLAYEY SAND
SM = SILTY SAND
SW = WELL GRADED SAND
GW = WELL GRADED GRAVEL
ML = SILT
SP = POORLY GRADED SAND

LEGEND

EXISTING GRADE
FINAL RECLAMATION SURFACE
BOTTOM OF MINING SURFACE
LITHOLOGY CONTACT
AREA TO BE REGRADED AT FINAL RECLAMATION
INFERRED WATER TABLE



APPROXIMATE SCALE IN FEET

NOTES:

1. 100-FT SETBACK TO FINAL RECLAMATION SURFACE IS ONLY APPLICABLE TO PARCEL 19108. ALL OTHER PARCELS WILL MAINTAIN A 50-FT SETBACK TO FINAL RECLAMATION SURFACE.
2. MINE TO 10 FEET ABOVE WATER TABLE
3. MINE FLOOR RAISED TO 300 FEET WITH 85% COMPACTION
4. MSL = MEAN SEA LEVEL
5. CY = CUBIC YARDS

SOURCE:
HYDROGEOLOGIC SITE ASSESSMENT REPORT

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

DRAWN BY: PM CHECKED BY: JKH

CLIENT
LAKE ERIE TRUCKING, LLC

Wood
Environment & Infrastructure Solutions, Inc.
4020 Lake Washington Blvd NE, Suite 200
Kirkland, Washington 98033

wood.

PROJECT
LAKE ERIE PIT PIT 1 EXPANSION
Anacortes, Washington

TITLE
EAST SLOPE
CROSS SECTION A-A'

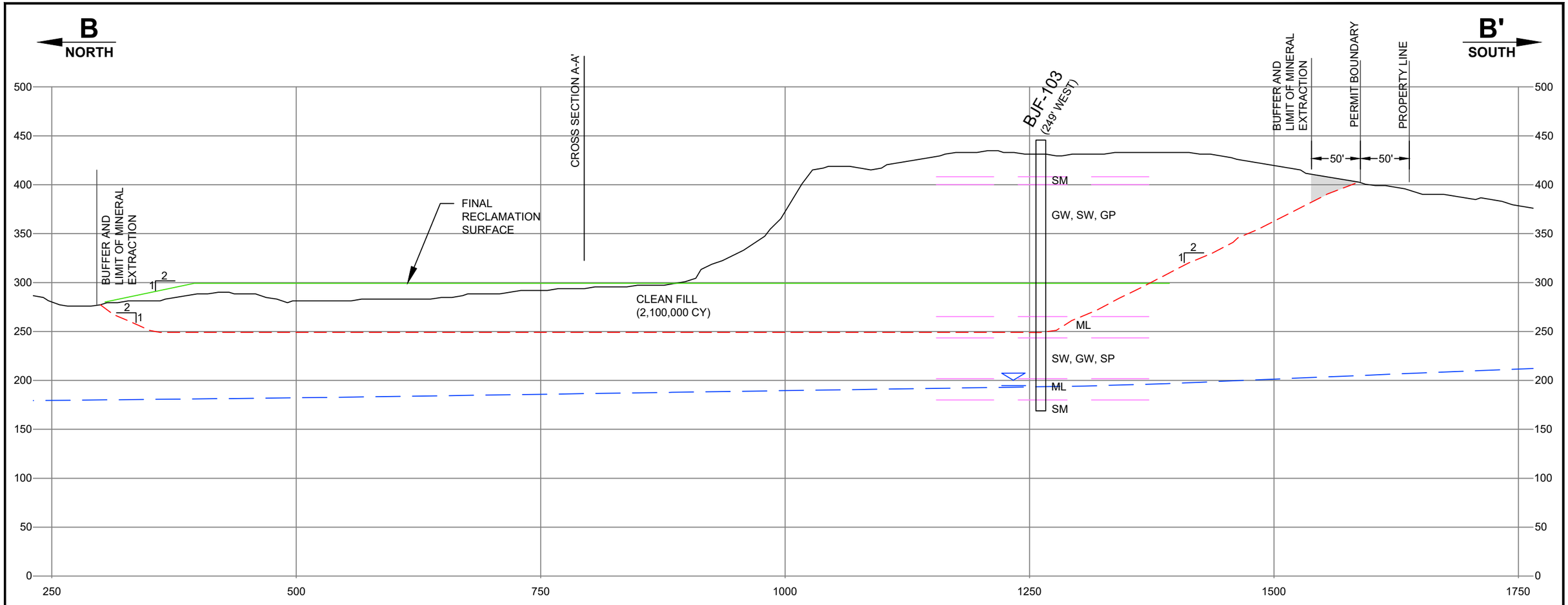
DATE
MAY 2022

SCALE
AS SHOWN

PROJECT NO.
PS22-20529-0

FIGURE
4

C:\Users\adam.stenberg\OneDrive - Wood PLC\Wood\PS22205290\LakeEnePit_SlopeStabilityFigures_040822.dwg - EastSlope - May. 06, 2022 12:17pm - adam.stenberg

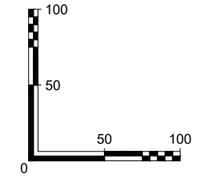


KEY

CL = CLAY
GC = CLAYEY GRAVEL
SC = CLAYEY SAND
SM = SILTY SAND
SW = WELL GRADED SAND
GW = WELL GRADED GRAVEL
ML = SILT
SP = POORLY GRADED SAND

LEGEND

- EXISTING GRADE
- FINAL RECLAMATION SURFACE
- BOTTOM OF MINING SURFACE
- LITHOLOGY CONTACT
- AREA TO BE REGRADED AT FINAL RECLAMATION
- INFERRED WATER TABLE



NOTES:

1. 100-FT SETBACK TO FINAL RECLAMATION SURFACE IS ONLY APPLICABLE TO PARCEL 19108. ALL OTHER PARCELS WILL MAINTAIN A 50-FT SETBACK TO FINAL RECLAMATION SURFACE.
2. MINE TO 10 FEET ABOVE WATER TABLE
3. MINE FLOOR RAISED TO 300 FEET WITH 85% COMPACTION
4. MSL = MEAN SEA LEVEL
5. CY = CUBIC YARDS

SOURCE:
HYDROGEOLOGIC SITE ASSESSMENT REPORT

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

DRAWN BY: PM CHECKED BY: JKH

CLIENT
LAKE ERIE TRUCKING, LLC

Wood
Environment & Infrastructure Solutions, Inc.
4020 Lake Washington Blvd NE, Suite 200
Kirkland, Washington 98033

wood.

PROJECT
LAKE ERIE PIT PIT 1 EXPANSION
Anacortes, Washington

TITLE
SOUTH SLOPE
CROSS SECTION B-B'

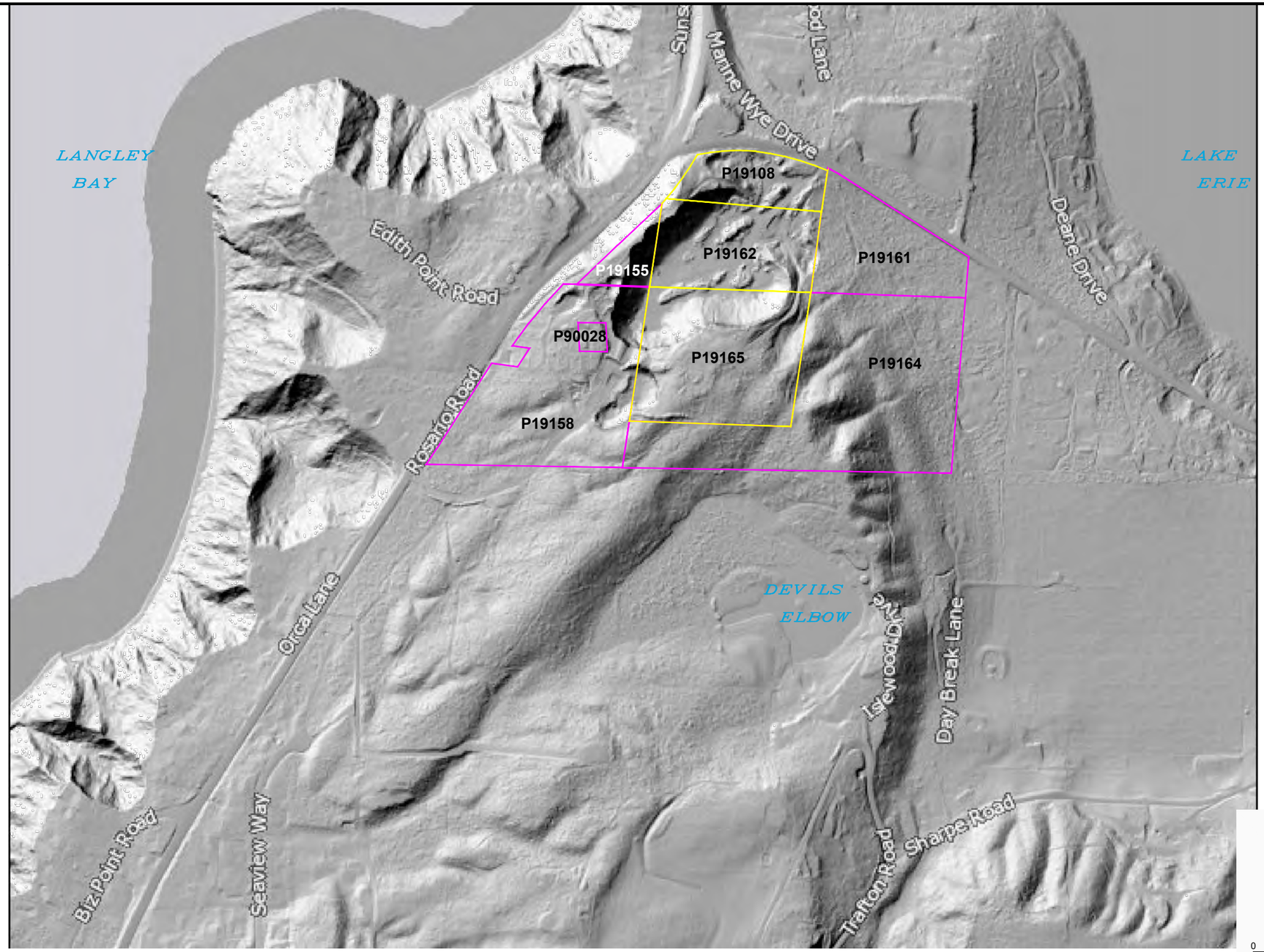
DATE
MAY 2022

SCALE
AS SHOWN

PROJECT NO.
PS22-20529-0

FIGURE
5

C:\Users\adam.stenberg\OneDrive - Wood PLC\Wood\PS22205290\LakeEriePit_SlopeStabilityFigures_040822.dwg - SouthSlope - May, 06, 2022 12:18pm - adam.stenberg



LEGEND

- Current Permitted Parcels
- Expansion Parcels

SOURCE:
SKAGIT COUNTY
LIDAR 2016 HILL SHADE.

DRAWN BY: PM CHECKED BY: JKH

CLIENT: LAKE ERIE TRUCKING, LLC	wood.	PROJECT: LAKE ERIE PIT PIT 1 EXPANSION Anacortes, Washington	DATE: MAY 2022
			SCALE: AS SHOWN
Wood Environment & Infrastructure Solutions, Inc. 4020 Lake Washington Blvd NE, Suite 200 Kirkland, Washington 98033		TITLE: LIDAR MAP	PROJECT NO.: PS22-20529-0
			FIGURE: 6

C:\Users\adam.stenberg\OneDrive - Wood PLC\Wood\PS22205290\LakeEriePit_SlopeStabilityFigures_040822.dwg - PlanView-Lidar - May, 06, 2022 12:23pm - adam.stenberg

Appendix A

Appendix A Site Photographs

Photograph 1. Lake Erie Pit looking east

Photograph 2. Lake Erie Pit looking south

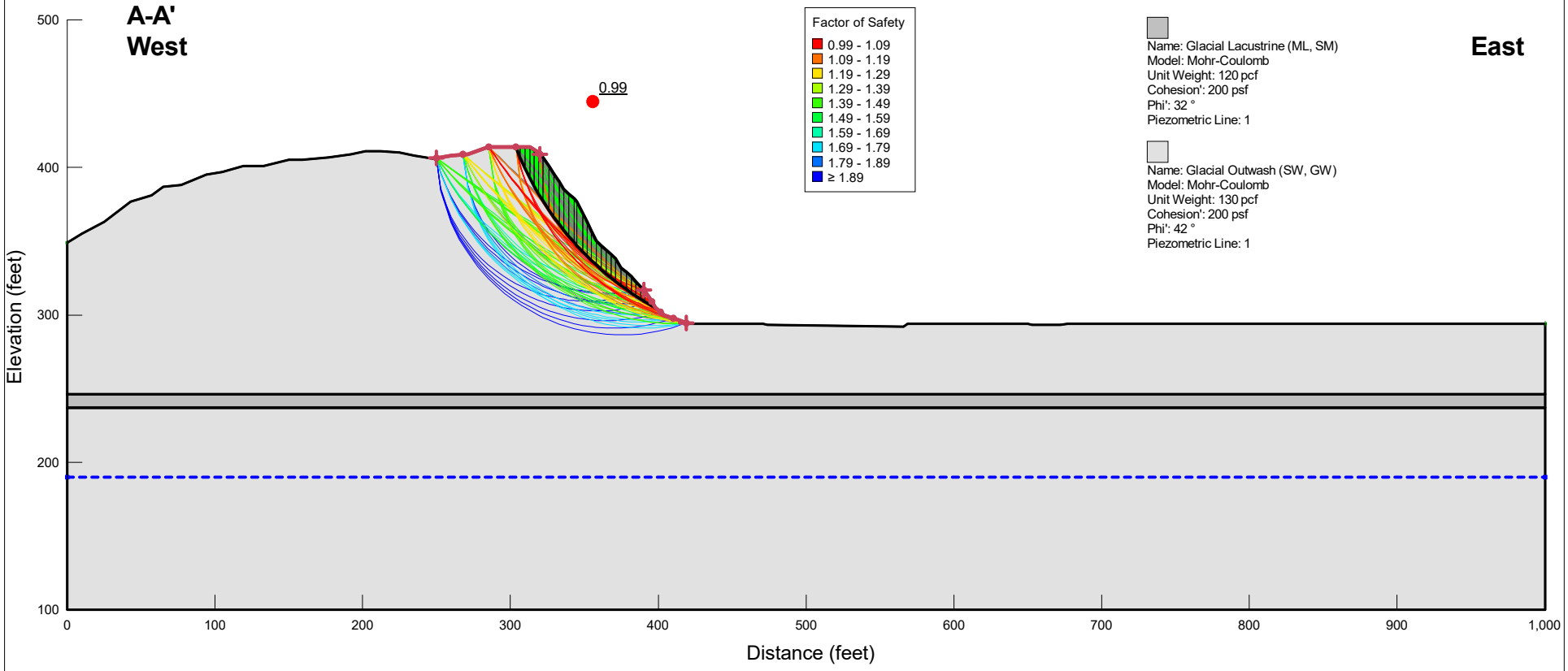
Photograph 3. Lake Erie Pit looking southwest

Photograph 4. New well looking east

Appendix B

Lake Erie Pit 1 Expansion
Anacortes, Washington

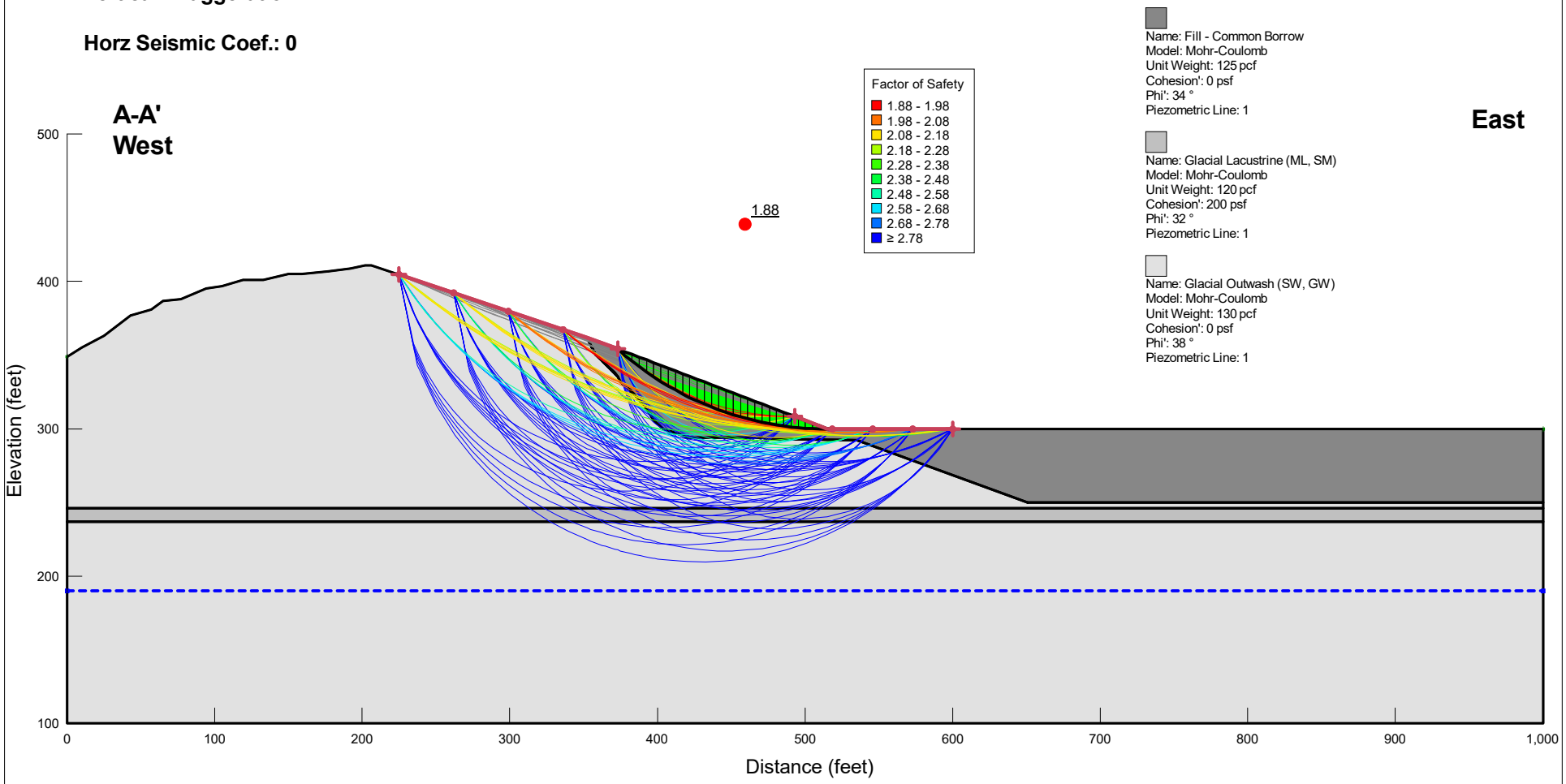
Current Slope Condition
Name: A-A' West to East - 1H:1V Current
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1



Lake Erie Pit 1 Expansion
Anacortes, Washington

Reclaimed West Slope Condition
Name: A-A' West to East - 2H:1V Cut/Fill
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1

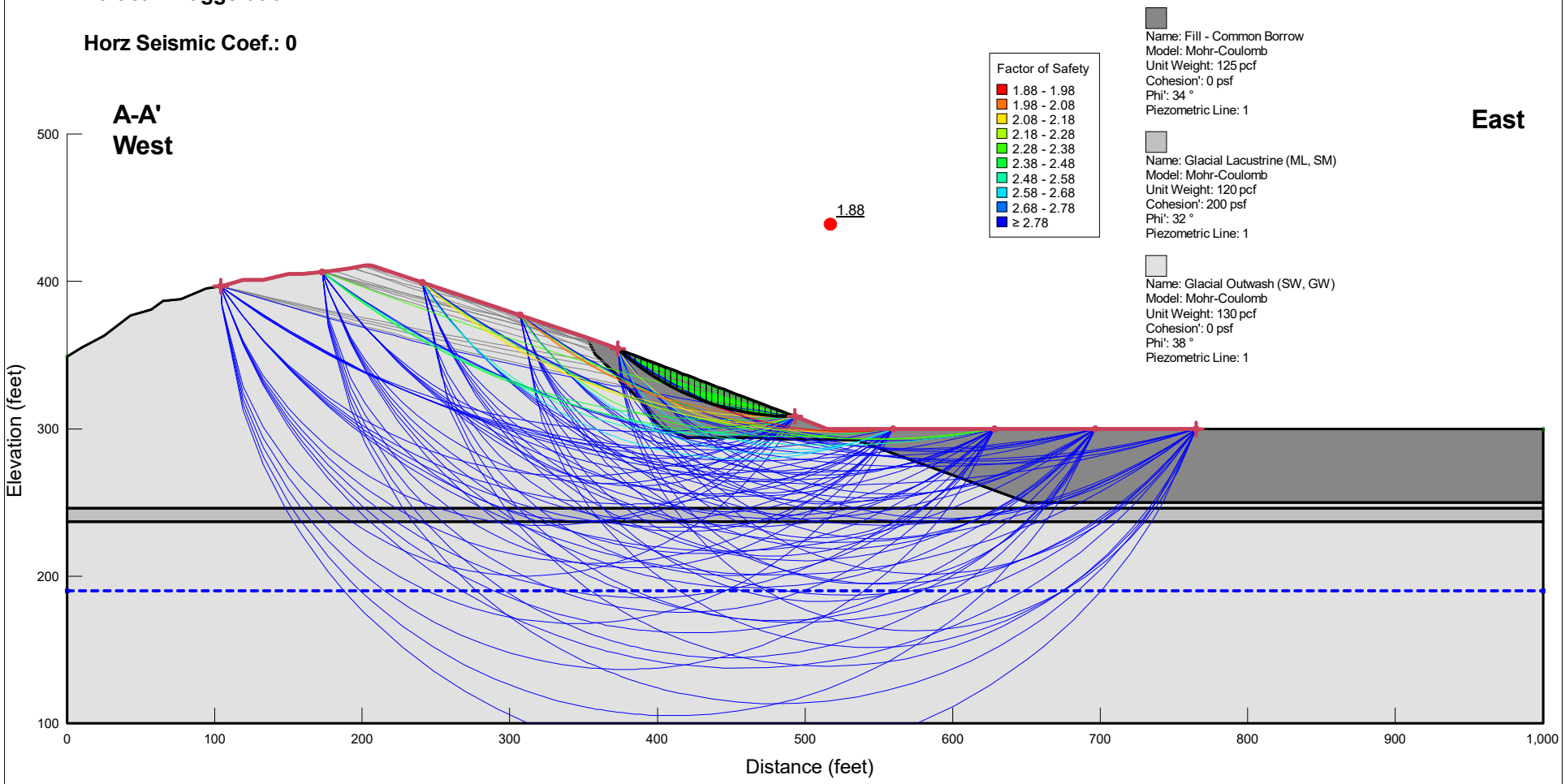
Horz Seismic Coef.: 0



Lake Erie Pit 1 Expansion
Anacortes, Washington

Reclaimed West Slope Condition - Broad Range
Name: A-A' West to East - 2H:1V Cut/Fill
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1

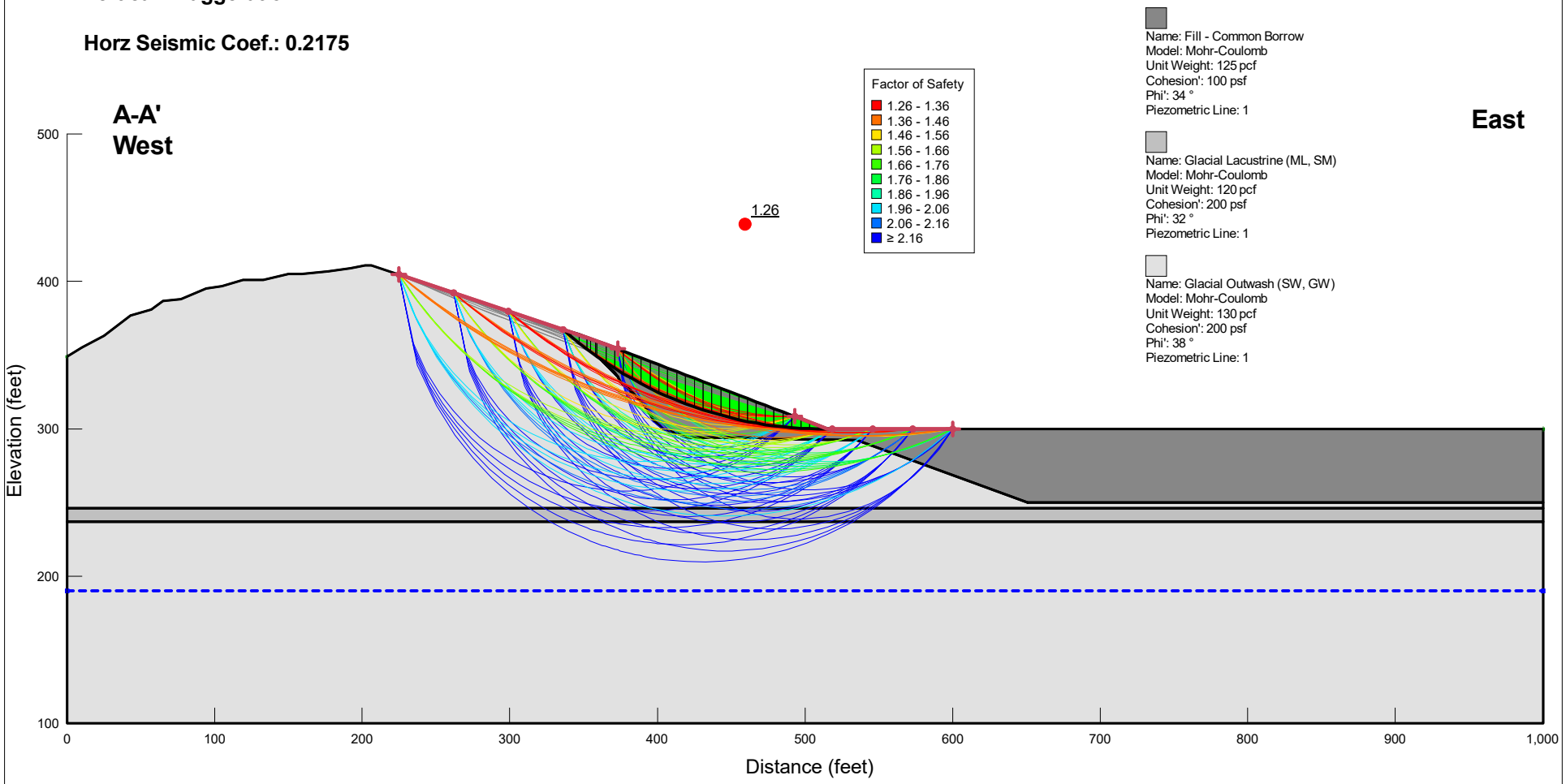
Horz Seismic Coef.: 0



Lake Erie Pit 1 Expansion
Anacortes, Washington

Reclaimed West Slope Condition
Name: A-A' West to East - 2H:1V Cut/Fill
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1

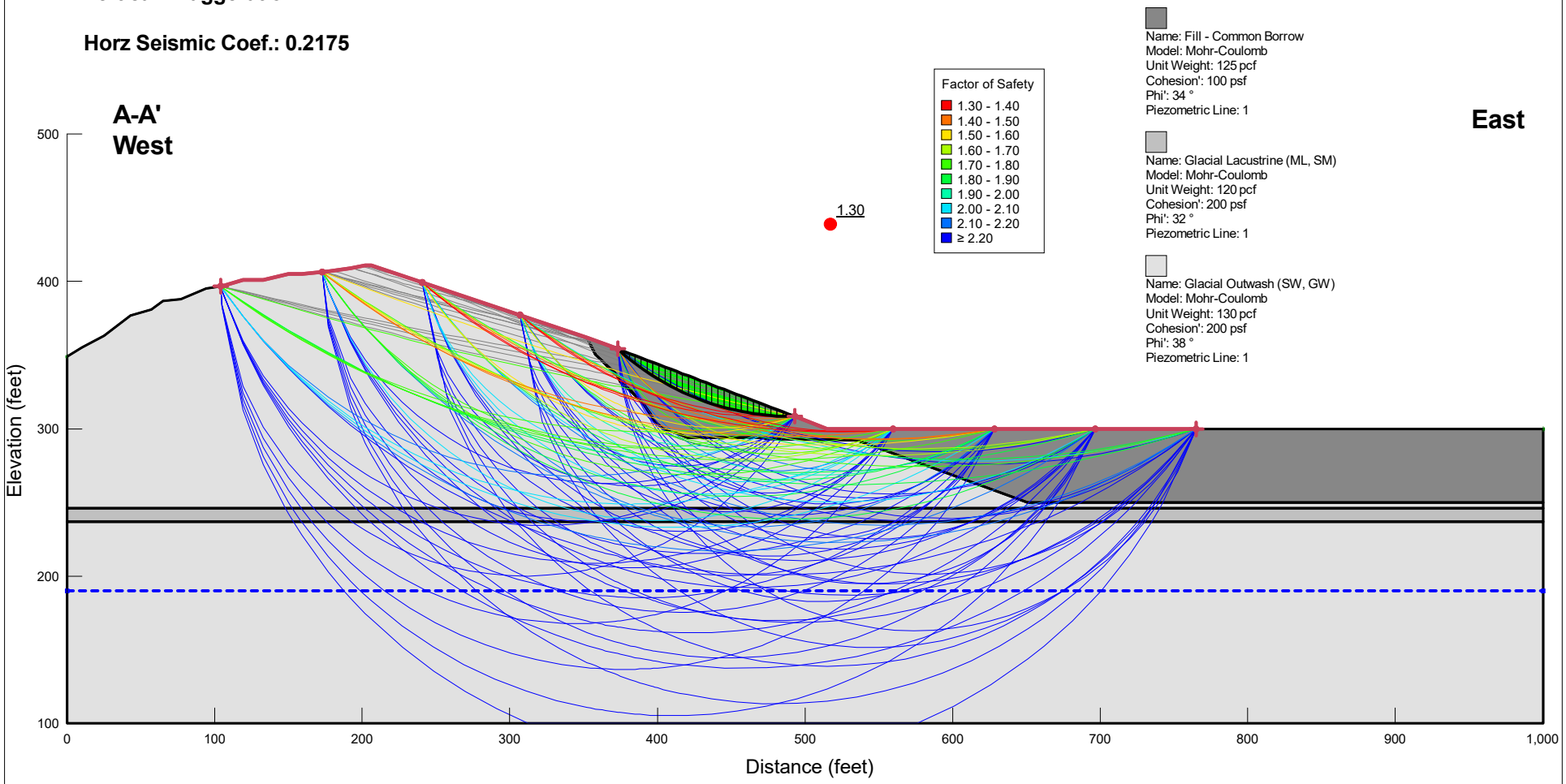
Horz Seismic Coef.: 0.2175



Lake Erie Pit 1 Expansion
Anacortes, Washington

Reclaimed West Slope Condition
Name: A-A' West to East - 2H:1V Cut/Fill
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1

Horz Seismic Coef.: 0.2175



Lake Erie Pit 1 Expansion
Anacortes, Washington

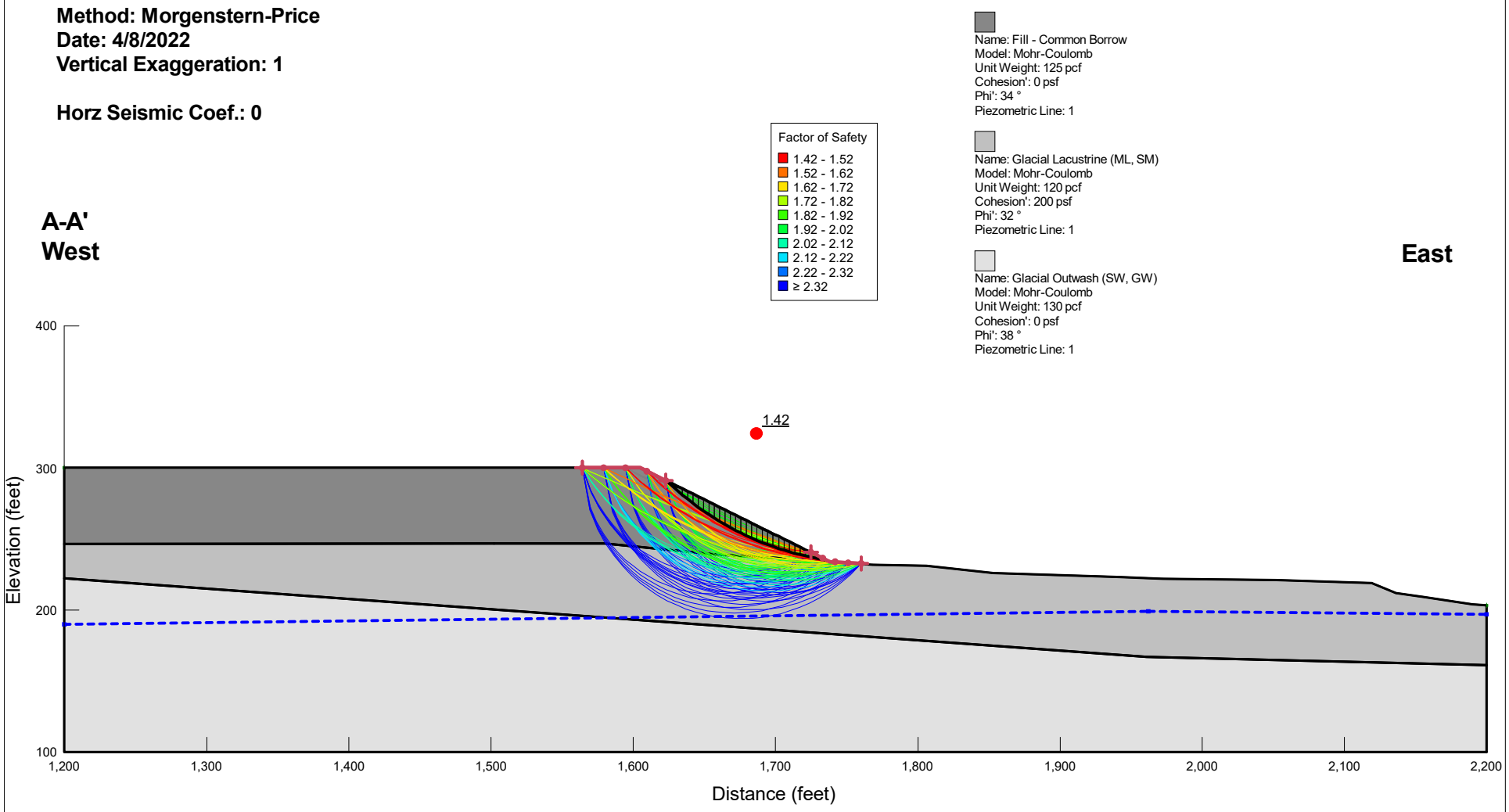
Reclaimed East Slope Condition
Name: A-A' West to East - 2H:1V Cut/Fill
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1

Horz Seismic Coef.: 0

Name: Fill - Common Borrow
Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion': 0 psf
Phi': 34 °
Piezometric Line: 1

Name: Glacial Lacustrine (ML, SM)
Model: Mohr-Coulomb
Unit Weight: 120 pcf
Cohesion': 200 psf
Phi': 32 °
Piezometric Line: 1

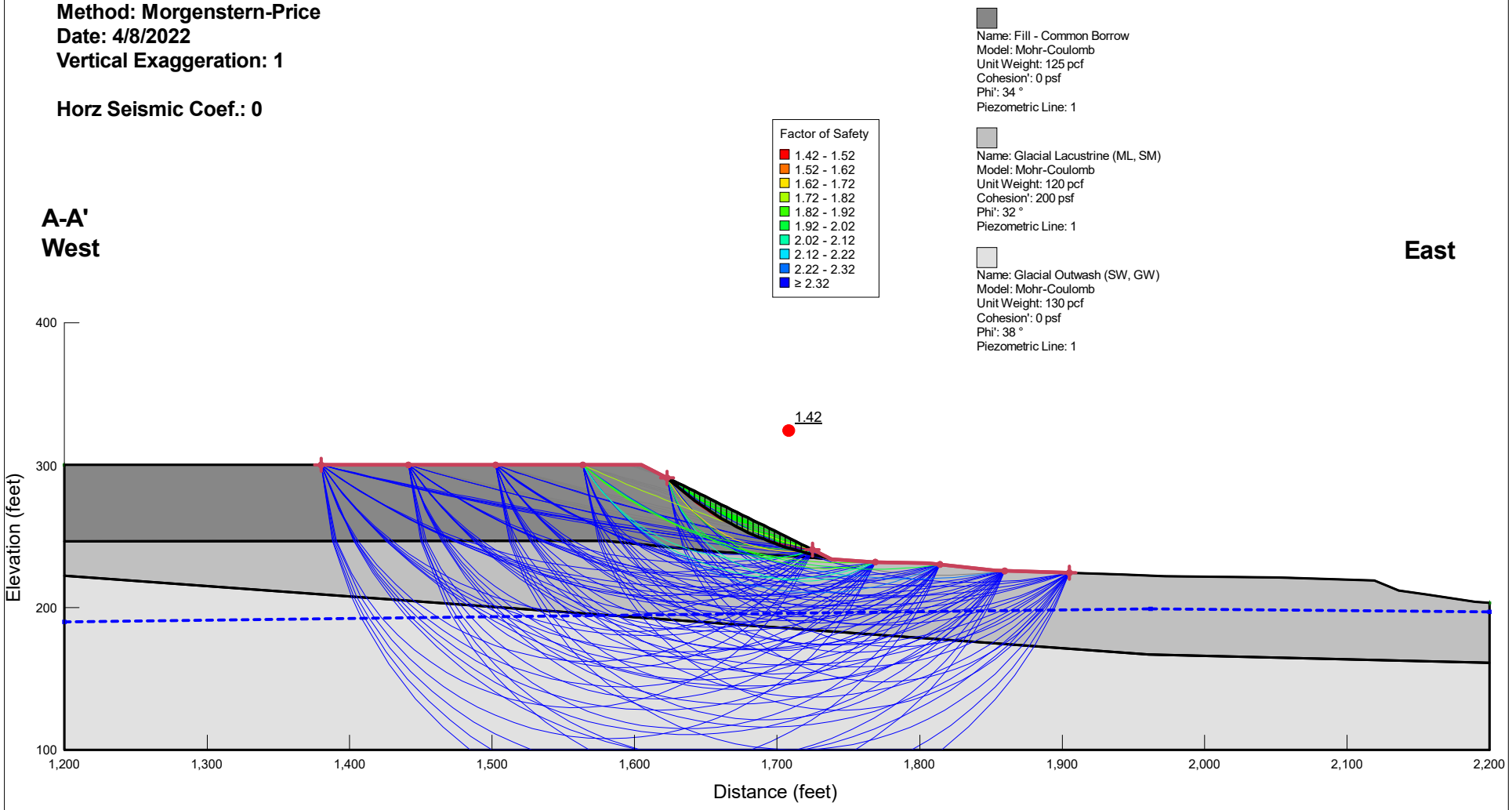
Name: Glacial Outwash (SW, GW)
Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion': 0 psf
Phi': 38 °
Piezometric Line: 1



Lake Erie Pit 1 Expansion
Anacortes, Washington

Reclaimed East Slope Condition
Name: A-A' West to East - 2H:1V Cut/Fill
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1

Horz Seismic Coef.: 0



Lake Erie Pit 1 Expansion
Anacortes, Washington

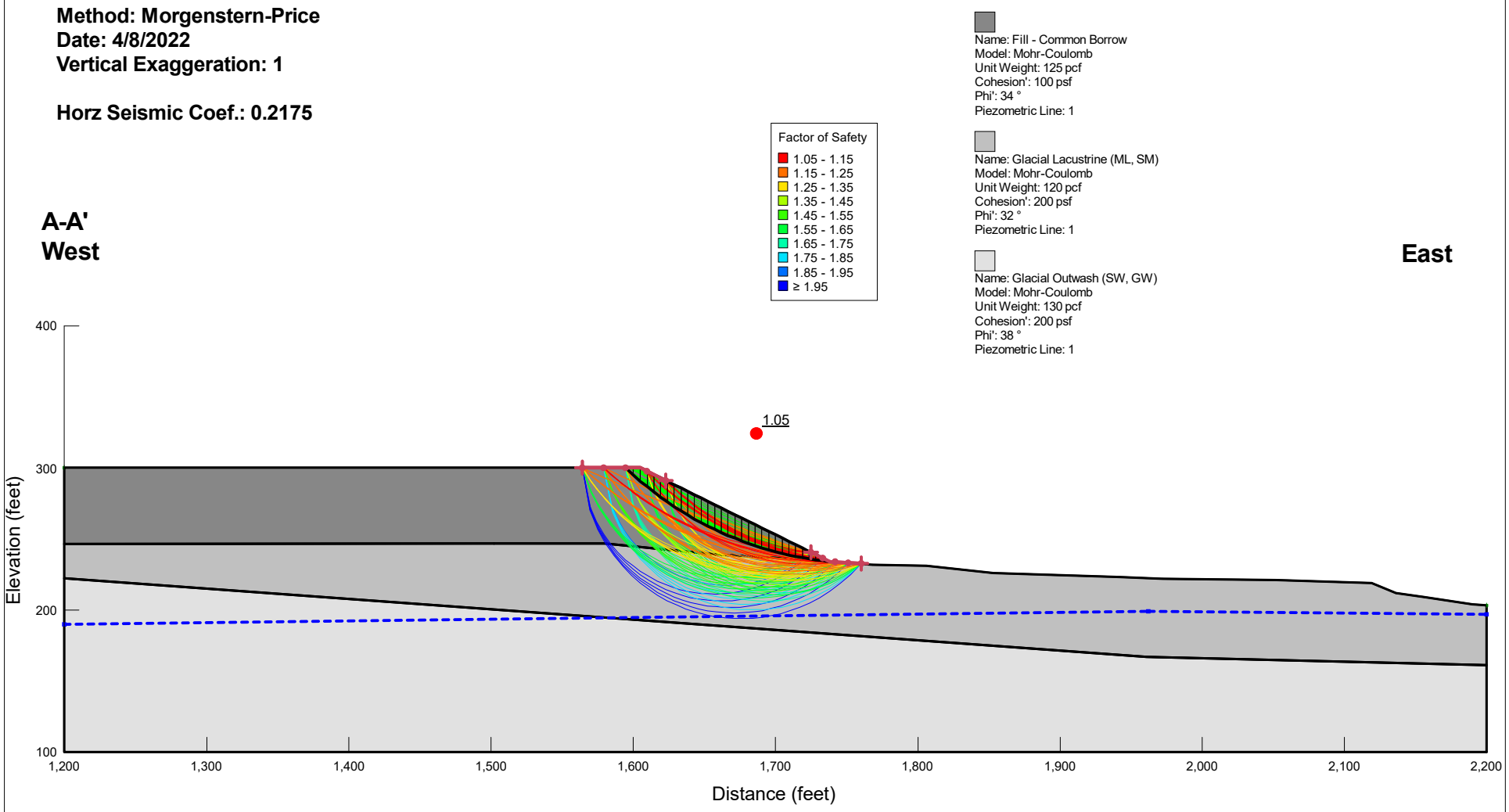
Reclaimed East Slope Condition
Name: A-A' West to East - 2H:1V Cut/Fill
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1

Horz Seismic Coef.: 0.2175

Name: Fill - Common Borrow
Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion': 100 psf
Phi': 34 °
Piezometric Line: 1

Name: Glacial Lacustrine (ML, SM)
Model: Mohr-Coulomb
Unit Weight: 120 pcf
Cohesion': 200 psf
Phi': 32 °
Piezometric Line: 1

Name: Glacial Outwash (SW, GW)
Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion': 200 psf
Phi': 38 °
Piezometric Line: 1



Lake Erie Pit 1 Expansion
Anacortes, Washington

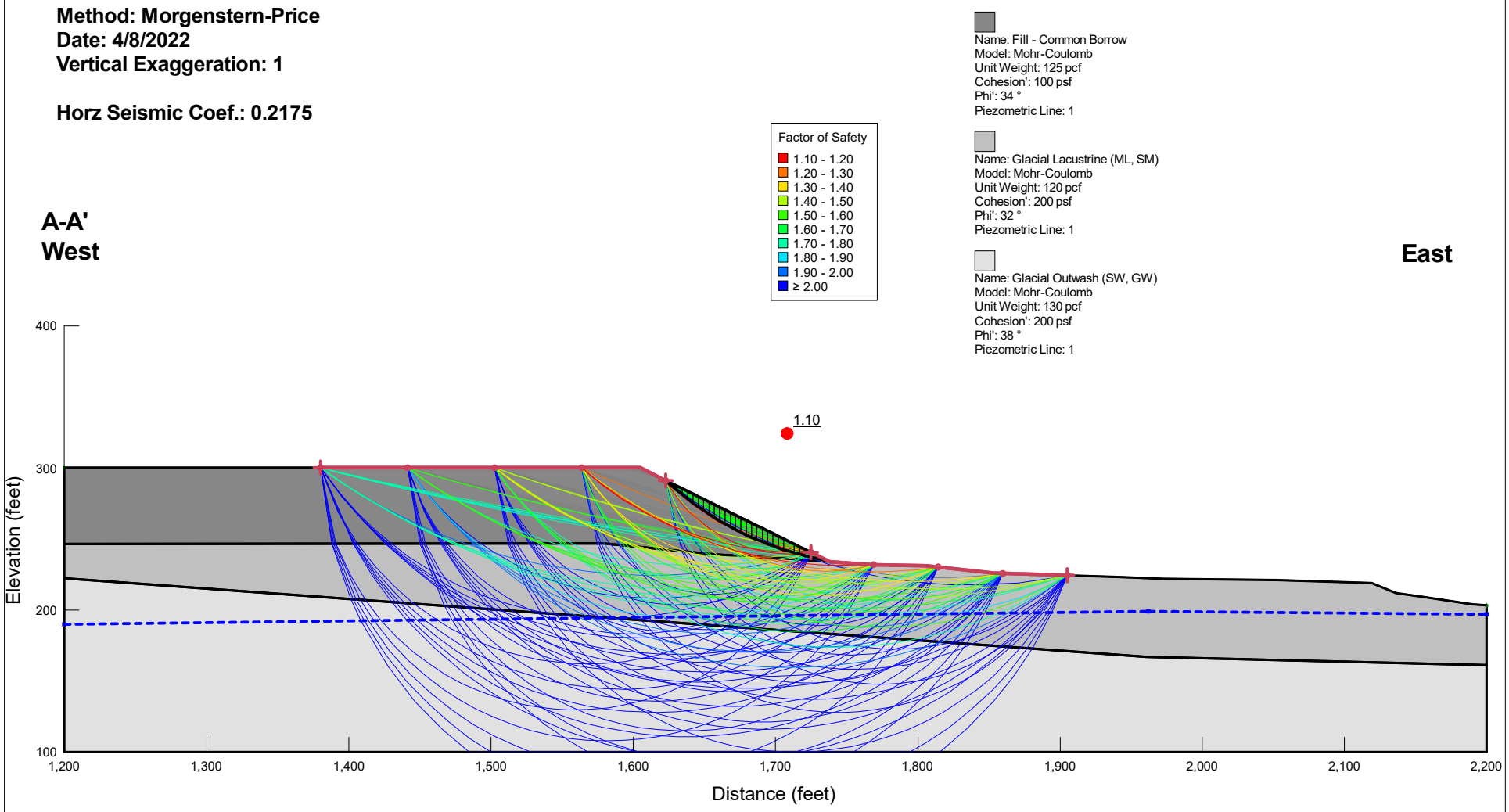
Reclaimed East Slope Condition
Name: A-A' West to East - 2H:1V Cut/Fill
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1

Horz Seismic Coef.: 0.2175

Name: Fill - Common Borrow
Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion': 100 psf
Phi': 34 °
Piezometric Line: 1

Name: Glacial Lacustrine (ML, SM)
Model: Mohr-Coulomb
Unit Weight: 120 pcf
Cohesion': 200 psf
Phi': 32 °
Piezometric Line: 1

Name: Glacial Outwash (SW, GW)
Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion': 200 psf
Phi': 38 °
Piezometric Line: 1



Lake Erie Pit 1 Expansion
Anacortes, Washington

Reclaimed South Slope Condition
Name: B-B' North to South - 2H:1V Fill
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1

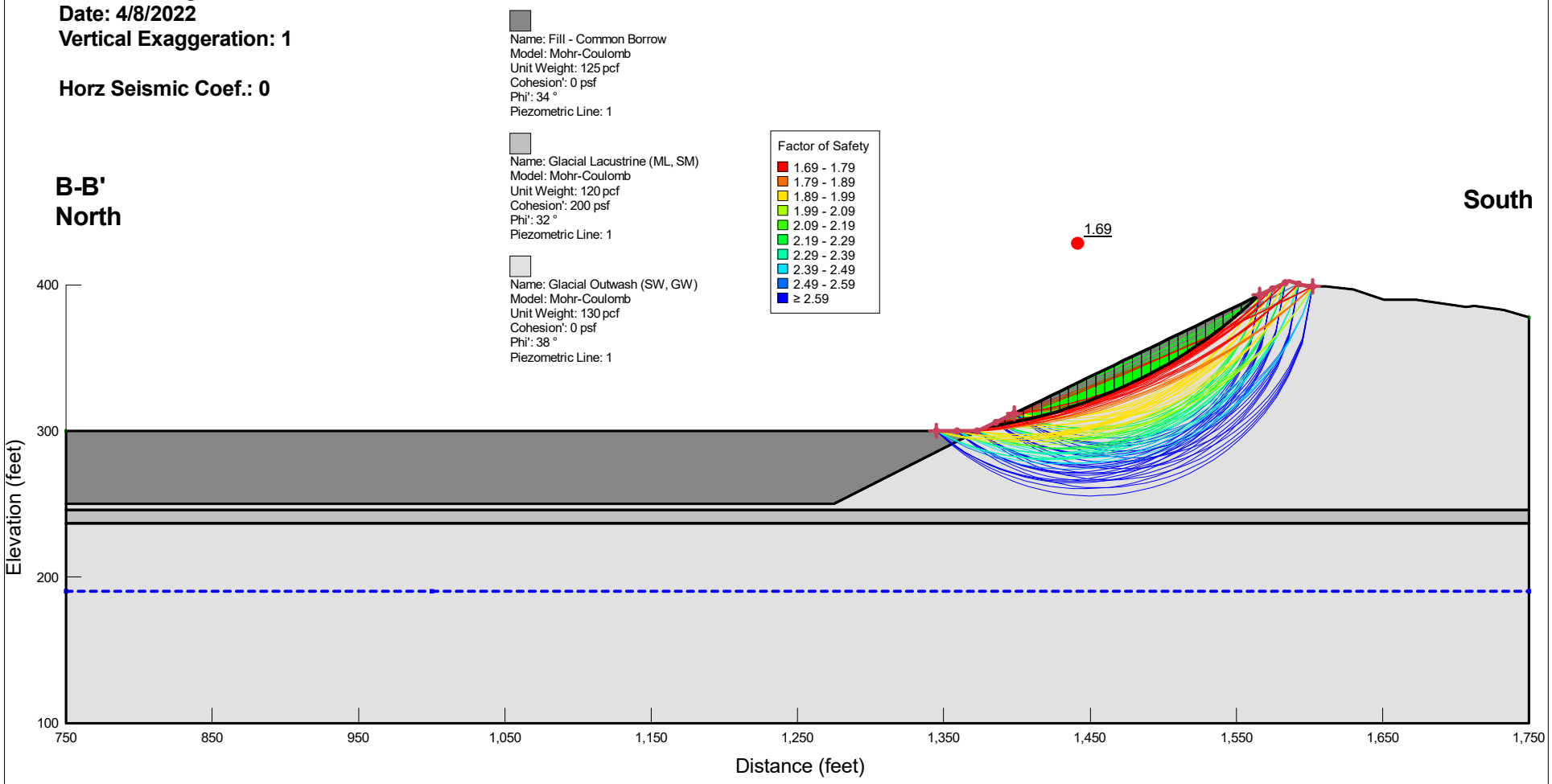
Horz Seismic Coef.: 0

Name: Fill - Common Borrow
Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion': 0 psf
Phi': 34 °
Piezometric Line: 1

Name: Glacial Lacustrine (ML, SM)
Model: Mohr-Coulomb
Unit Weight: 120 pcf
Cohesion': 200 psf
Phi': 32 °
Piezometric Line: 1

Name: Glacial Outwash (SW, GW)
Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion': 0 psf
Phi': 38 °
Piezometric Line: 1

Factor of Safety
- 1.69 - 1.79
- 1.79 - 1.89
- 1.89 - 1.99
- 1.99 - 2.09
- 2.09 - 2.19
- 2.19 - 2.29
- 2.29 - 2.39
- 2.39 - 2.49
- 2.49 - 2.59
- ≥ 2.59



Lake Erie Pit 1 Expansion
Anacortes, Washington

Reclaimed South Slope Condition
Name: B-B' North to South - 2H:1V Fill
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1

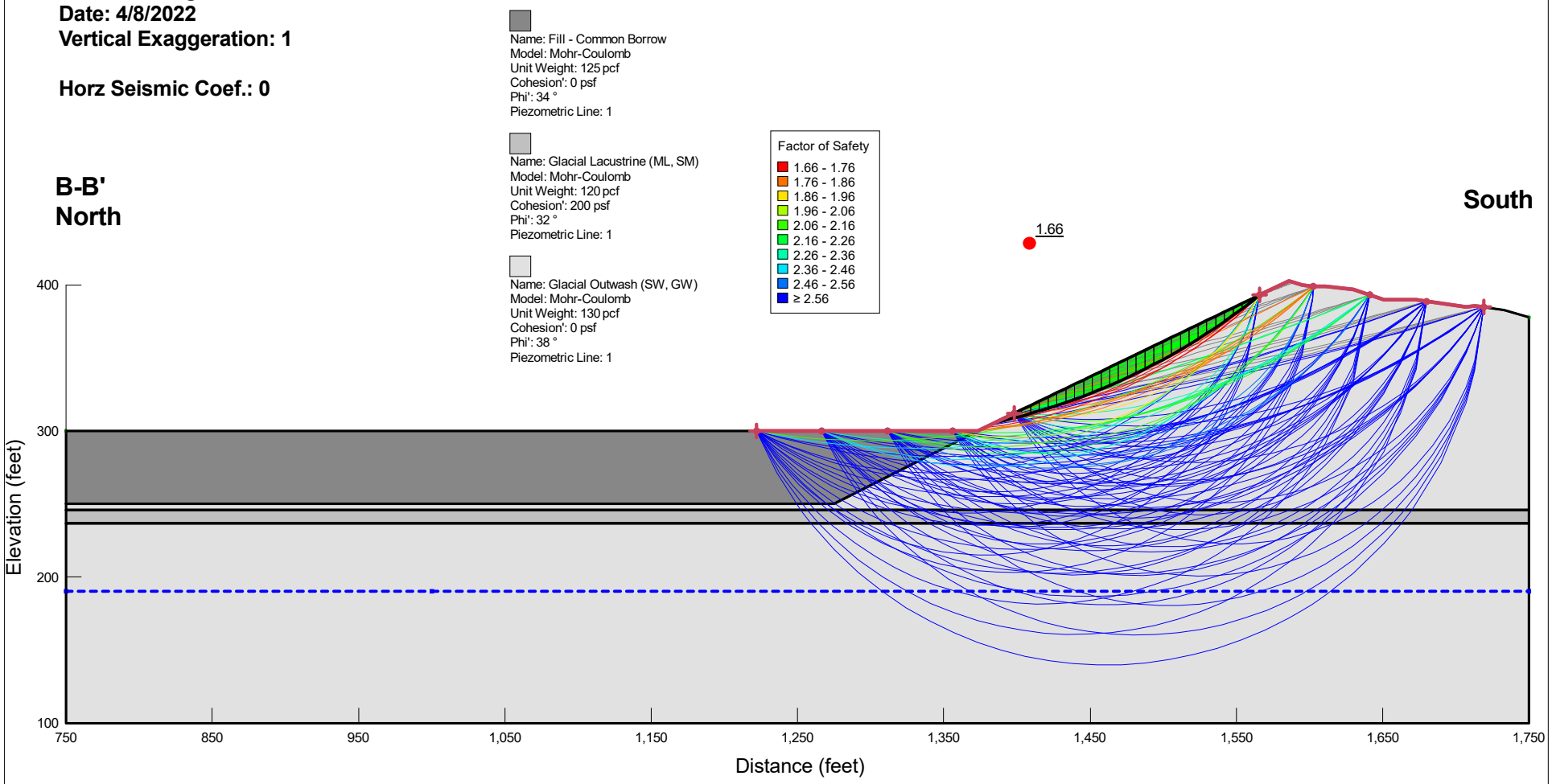
Horz Seismic Coef.: 0

Name: Fill - Common Borrow
Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion': 0 psf
Phi': 34 °
Piezometric Line: 1

Name: Glacial Lacustrine (ML, SM)
Model: Mohr-Coulomb
Unit Weight: 120 pcf
Cohesion': 200 psf
Phi': 32 °
Piezometric Line: 1

Name: Glacial Outwash (SW, GW)
Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion': 0 psf
Phi': 38 °
Piezometric Line: 1

Factor of Safety
- 1.66 - 1.76
- 1.76 - 1.86
- 1.86 - 1.96
- 1.96 - 2.06
- 2.06 - 2.16
- 2.16 - 2.26
- 2.26 - 2.36
- 2.36 - 2.46
- 2.46 - 2.56
- ≥ 2.56



Lake Erie Pit 1 Expansion
Anacortes, Washington

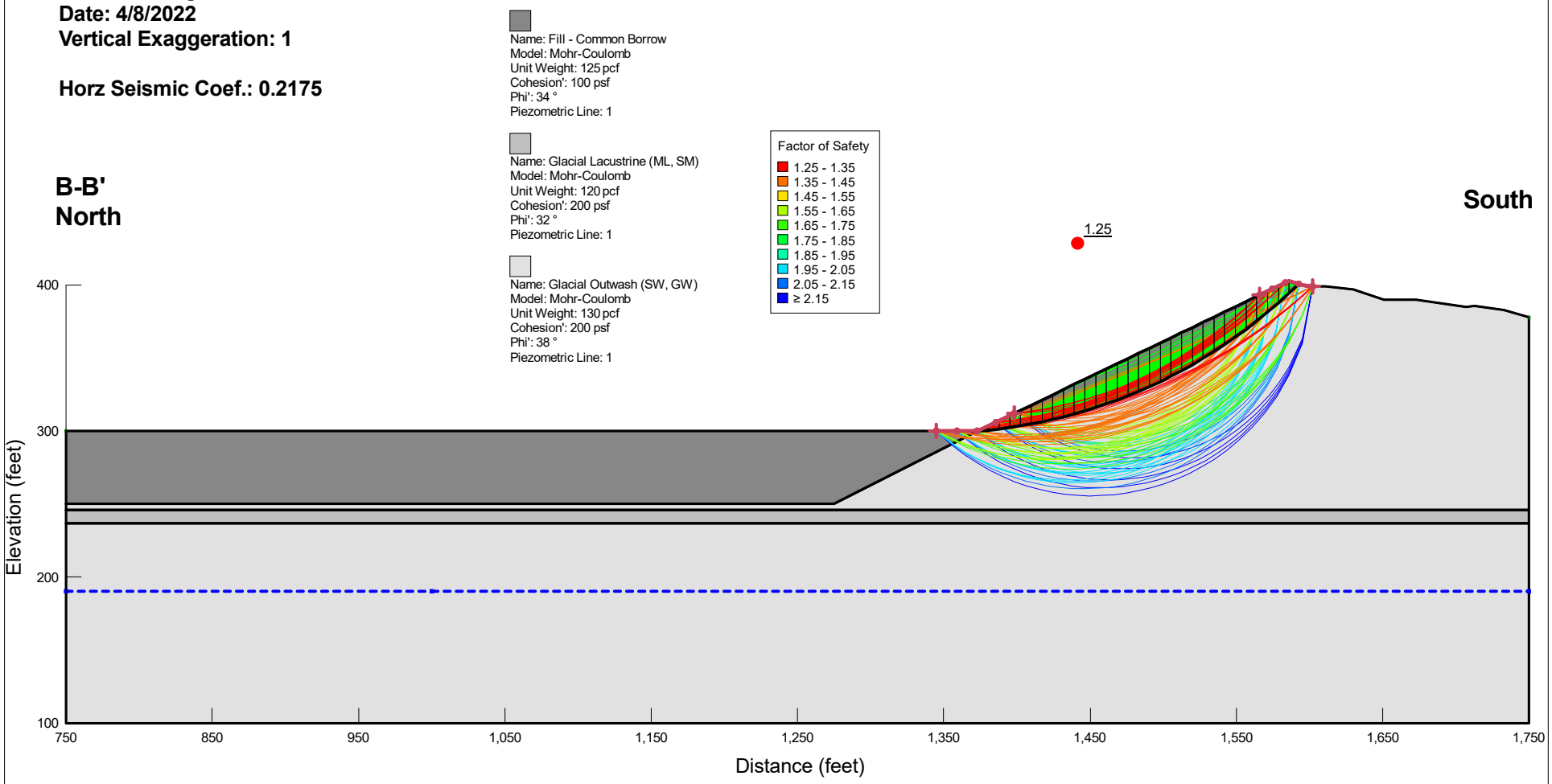
Reclaimed South Slope Condition
Name: B-B' North to South - 2H:1V Fill
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1

Horz Seismic Coef.: 0.2175

Name: Fill - Common Borrow
Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion': 100 psf
Phi': 34 °
Piezometric Line: 1

Name: Glacial Lacustrine (ML, SM)
Model: Mohr-Coulomb
Unit Weight: 120 pcf
Cohesion': 200 psf
Phi': 32 °
Piezometric Line: 1

Name: Glacial Outwash (SW, GW)
Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion': 200 psf
Phi': 38 °
Piezometric Line: 1



Lake Erie Pit 1 Expansion
Anacortes, Washington

Reclaimed South Slope Condition
Name: B-B' North to South - 2H:1V Fill
Method: Morgenstern-Price
Date: 4/8/2022
Vertical Exaggeration: 1

Horz Seismic Coef.: 0.2175

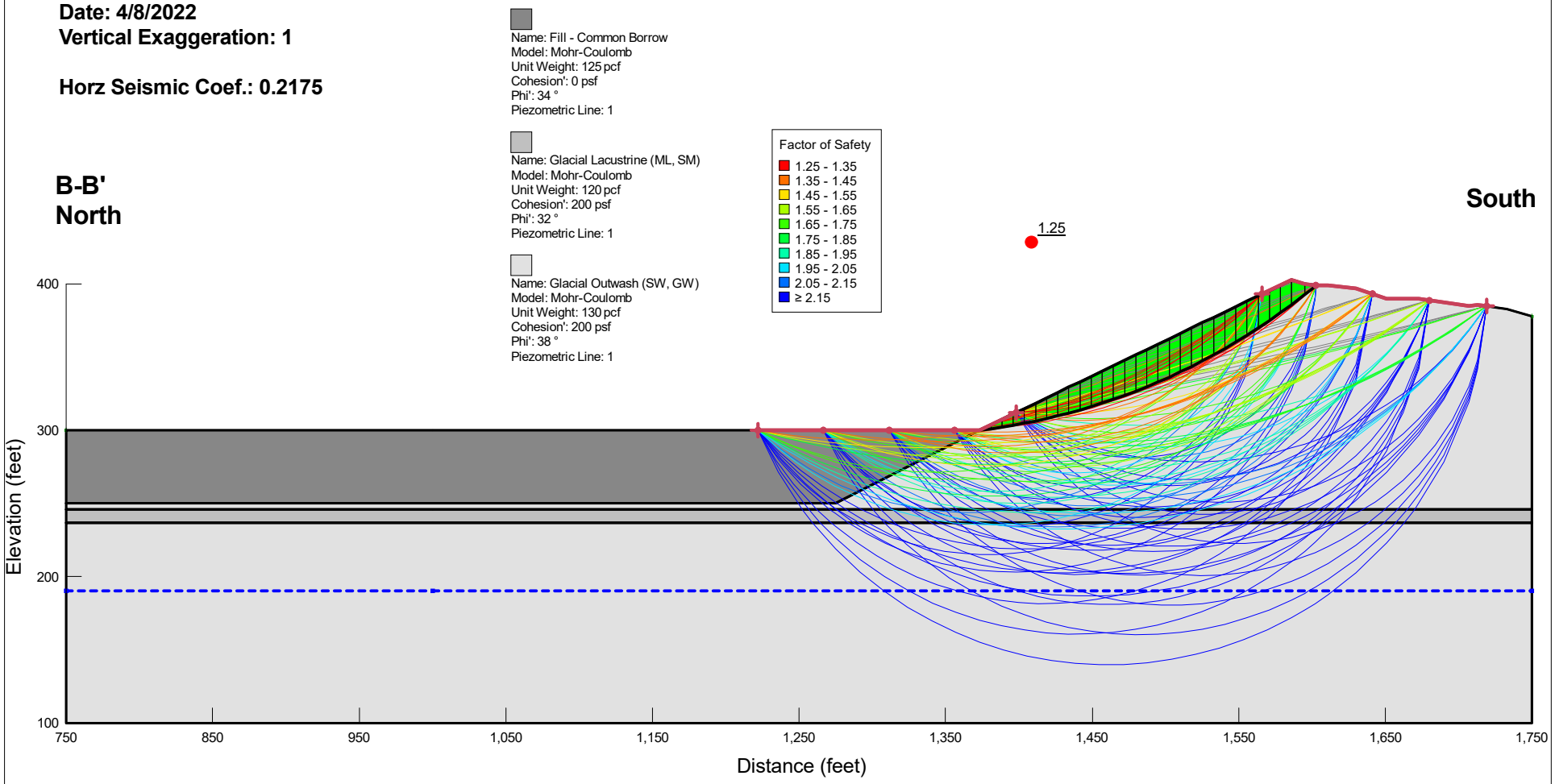


EXHIBIT #32

EVERGREEN ISLAND'S LETTER DATED: 11/18/2022 + STRATUM GROUP REVIEW OF GEOLOGIC HAZARD SITE ASSESSMENT (DATED NOVEMBER 15, 2022)

LORING ADVISING

By Email

November 18, 2022

Kevin Cricchio, Senior Planer
Skagit County Planning and Development Services
1800 Continental Place
Mount Vernon, WA 98273
kcricchio@co.skagit.wa.us

Re: File No. PL16-0056 -- Lake Erie Pit LLC Gravel Mine Expansion Special Use Permit

Dear Mr. Cricchio,

I'm writing on behalf of Evergreen Islands ("Evergreen") to address the inapposite Geologic Hazard Site Assessment ("Assessment") that Wood Environment & Infrastructure Solutions, Inc. submitted on behalf of the Lake Erie Pit 1 Expansion in August 2022. As explained in the attached letter from Dan McShane, a licensed engineering geologist, the Assessment did not provide the analyses requested by Skagit County Planning and Development Services ("PDS") in its March 21, 2021 letter to Lake Erie LLC. It is frustrating that a year after the Hearing Examiner granted an extension on the permit application, these analyses have not yet been conducted. But given the lack of new, applicable information, Evergreen requests that PDS set aside the Assessment and reiterate its requests to Lake Erie.

As you will see in the comments from Mr. McShane, he determined that the Assessment did not address the central question posed to Lake Erie after the Board of Commissioners remanded the application decision – would it impact groundwater that decreased bluff stability for the residential neighborhoods to the west and northwest of the mine site? Mr. McShane's review found that "[t]he potential groundwater flow direction was not analyzed in the report" and that "[t]he springs on the shoreline bluffs to the west and northwest of the pit were not analyzed." He concludes that, "[r]egrettably, the geology hazard assessment does not address the groundwater flow and slope stability of the nearby shoreline bluff as requested by Skagit County."

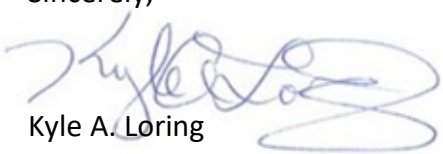
It is possible that Lake Erie would have been able to supply PDS with the requested analysis if it had continued to engage Canyon Environmental Group ("Canyon") for the work they proposed in September 2021. At that time, Lake Erie supplied the Hearing Examiner with a Proposed Hydrogeology and Groundwater Characterization Timeline from Canyon that expressly stated that the scope of the services was to "help characterize the groundwater and groundwater flow directions related to existing conditions and the proposed mine expansion."

That proposal was signed by a hydrogeologist/wetland ecologist/environmental geologist. Yet the Assessment was authored by a different consultant--geotechnical engineers who conducted a more generic geologic hazard site assessment that did not acknowledge the documented shortcomings of the prior reports, and instead relied on them for the same unsupported assertion that groundwater at the site does not flow toward the nearby marine bluffs.

Because the Assessment does not offer information responsive to PDS' requests, it thus does not provide information necessary to determine the mine's risks on the residential neighborhood to the west and northwest of the proposed mine. Consequently, Evergreen is forced to request that PDS reiterate its request to Lake Erie to investigate groundwater flow at the site and its potential impact on the bluffs' slope stability.

If you have any questions, please do not hesitate to contact me at 360-622-8060 or kyle@loringadvising.com.

Sincerely,



Kyle A. Loring

Cc: Marlene Finley

Attachment: Stratum Group Comments Regarding Geologic Hazard Site Assessment

STRATUM GROUP
PO Box 2546, Bellingham, Washington 98227

November 15, 2022

Re: **Proposed Lake Erie Pit Expansion**
Comments Regarding Geologic Hazard Site Assessment

I reviewed the Wood Geologic Hazard Site Assessment for the proposed Lake Erie Pit expansion (dated August 11, 2022). The assessment does not address any of the areas outlined in the Skagit County Planning and Development Services (PDS) letter to Lake Erie LLC (dated March 21, 2021).

PDS requested that the assessment include three specific items:

1) "Analyze the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion and attendant removal of soil and vegetation which could alter groundwater behavior in the vicinity of the mine."

> The potential groundwater flow direction was not analyzed in the report. The report only references the previous reports that also did not analyze the groundwater flow direction towards the shoreline bluff.

2) "Analyze the presence of springs on the coastal bluff to the northwest of the mine that are at an elevation down gradient of the inferred groundwater level."

> The springs on the shoreline bluffs to the west and northwest of the pit were not analyzed. There is no discussion that the elevation of the springs are estimated to be at elevations that are lower than the groundwater measured near the pit and thus are likely down gradient to the pit such that groundwater from the pit area will flow towards the springs.

3) "Respond to the testimony of the professional geologist who identified that the proposed mine expansion will create an increased landslide risk."

> My testimony was never referenced and the report is not responsive to the issue of increased groundwater flow towards the shoreline bluff.

No where in the report is the stability of the shoreline bluff assessed and no bluff observations were made. The potential for altering groundwater, and the stability of the shoreline bluff from that alteration, have not been addressed.

Stratum Group appreciates the opportunity to comment on the adequacy of the geology hazard assessment. Regrettably, the geology hazard assessment does not address the groundwater flow and slope stability of the nearby shoreline bluff as requested by Skagit County.

Sincerely yours,
Stratum Group

Dan McShane, L.E.G., M.Sc.
Licensed Engineering Geologist

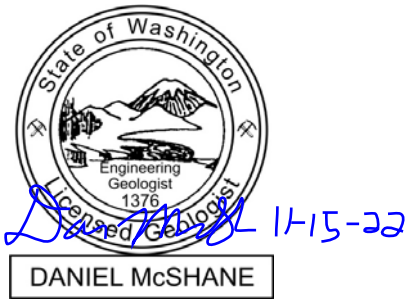


EXHIBIT #33

THIRD PARTY REVIEW OF GEOLOGIC HAZARD SITE ASSESSMENT & RESPONSE TO EVERGREEN ISLAND'S LETTER DATED 11/18/22 (RECEIVED JANUARY 19, 2023)

MEMORANDUM

Date: January 18, 2023

To: Kevin Cricchio, Skagit County Planning

From: Alan Wald, LHG. The Watershed Company

Project Name: Skagit County Lake Erie Pit Review

Project Number: 210231.9

Subject: Response to Evergreen Island communication of 11/18/2022 re: Lake Erie Pit

As per your request of 12/20/22, I have reviewed the comment letters from Loring Advising and the Stratum Group concerning potential groundwater issues and proposed expansion of the Lake Erie Pit. I have included (below) the 11/25/2022 report we provided Skagit County regarding the proposed project.

The main concerns raised in the Evergreen Island communication appear to be the adequacy of the groundwater flow assessment and potential impacts to bluff stability west and northwest of the proposed pit expansion.

The methods and results of the groundwater flow assessment are presented in several reports:

Maul, Foster, Alongi (MFA). Hydrogeologic Site Assessment Report. Lake Erie Pit Expansion. Bellingham, WA. December 2, 2016.

Maul, Foster, Alongi (MFA). Observation Well Installation. Lake Erie Pit Expansion. Bellingham, WA. September 28, 2017.

Northwest Groundwater Consultants (NGC). Lake Erie Pit Well Recommendations. Coeur d'Alene, Idaho. March 11, 2019. And

WA Dept of Ecology (WDOE). Water Well Report. Resource Protection Well BJF103. https://ecoloogy.wa.gov/wellconstruction. September 25, 2017.

The Wood Environment & Infrastructure Solutions, Inc (Wood). Geologic Hazard Site Assessment. Lake Erie Pit 1 Expansion. Kirkland, WA. August 11, 2022, uses the aquifer properties and groundwater flow characterization from these reports.

I revisited the methods and results of the aquifer characterization and groundwater flow analysis in the groundwater flow assessment and found no significant discrepancies or

inaccuracies in the data collection, hydrogeologic analysis, or discussion that would question the study results. The lithology is reasonably consistent with the well logs, the groundwater levels were developed from a comprehensive mass well measurement, and the flow paths were plotted perpendicular to the groundwater surface contours. The aquifer is well characterized at recorded depths and static water levels. The prevailing groundwater flow path is to the north and northeast of the proposed project.

Bluff areas to the west and southwest of the proposed project, including the Dodoson Canyon Springs, are 800 to 1,000 feet from the project with base elevations (below the scarps) of about 200 ft. msl. Based on documented groundwater surface elevations and local stratigraphy, it is likely that groundwater seepage is from the regional aquifer. I found no apparent reason to conclude the proposed project would change the rate or volume of groundwater discharge from seepage on the bluffs.

Attachment.

P#: **19164** Site Address: **13500 Rosario Road (Fidalgo Island)**
Property Owner(s): **Lake Erie Trucking, LLC**
Project Description: **Lake Erie Gravel Pit (Surface Mine)**
Notes:

Reviewed the hydrogeologic reports provided (see references), NRCS local soils descriptions, and water well logs of record for the general vicinity.

Project is a proposed expansion of gravel pit excavation (surface mine) and hauling in the vicinity of Lake Erie on Fidalgo Island, Skagit County. The project proposes to manage stormwater by capturing site runoff for infiltration. Proposed excavation is planned to be above the inferred ground water elevation of a local aquifer and no dewatering is anticipated. There are approximately 70 wells of record within a one-mile radius of the proposed surface mine, approximately 16 wells appear to be downgradient of the site (MFA, 2016). There is no record of existing contamination at the site.

A resource protection well (BJF103) was drilled for the project in 2017. The ground surface elevation for the well is 445.6 ft msl (MFA, 2017). The top of casing elevation for the well is 448.4 ft msl (NGC, 2019). The well log documents the approximately 20-foot-thick layer of semi-consolidated brown to gray clay, at depths of 189 to 209 ft. (259.4 to 239.4 msl) overlying water bearing strata at various depths (WDOE, 2017). This clay layer, or aquitard, serves as a protective element for the underlying aquifer and reduces the risk of groundwater contamination from surface sources. Static water level in the well was 255.4 ft btc (193 ft msl) on 9/19/2017 (MFA, 2017). The observed water level reflects commingled hydraulic heads in a resource protection well without screening (open hole at a depth of 277 ft) and undeveloped hydraulic continuity with the aquifer.

The inferred groundwater surface elevation in the aquifer, based on comparisons of static water levels in surrounding wells, is about 190 feet msl (MFA, 2016). The proposed project includes excavation to a bottom elevation of 250 ft. msl (Wood, 2022). The general direction of groundwater discharge in the local aquifer is north/northeast.

Surface soils in the project area include the Catla, Keystone, and LaConner soil series and topsoil depths generally range from 16 to 24 inches, grading into granular subsoils (NRCS, 2007)

<u>SCC 14.24.340: Aquifer recharge areas impact mitigation</u>

Based on project information available to date, the risk of impacts to aquifer recharge and groundwater quality due to the proposed surface mine appears to be generally low. Given some uncertainties in using inferred water level observations of commingled hydraulic heads, variability in land elevations, and different surface mine operations, several mitigations measures should be considered to further reduce potential impacts to aquifer recharge and groundwater quality. These proposed mitigation measures are as follows:

1. Surface soils, particularly topsoil, excavated at depths of 24 inches or more from mined areas should be stockpiled and replaced on exposed areas as excavation is completed. Topsoil and subsoils should be stockpiled and applied separately to avoid mixing different soil fertilities. Stockpiled soils should not be sold, or given away, or otherwise removed, or used for screening

berms. These soils provide important functions for protecting water quality of surface infiltration and promoting revegetation of the site.

2. The elevation of subsurface strata may vary across the site and excavation to elevations of 250 ft. msl may encounter the brown/gray clay aquitard overlying the deeper aquifer. This layer should not be excavated or disturbed in order to maintain protection of aquifer storage and existing wells from potential disturbance or contamination.
3. It is recommended that resource protection well BJF103 be monitored over the life of the project by measuring water level and submitting a water quality sample (drinking water standards) at least once a year. This information provides an essential baseline for evaluating future changes in groundwater conditions.
4. It is recommended that the project area, particularly haul roads, have secure site access controls, including fencing and gates as needed, to prevent unauthorized or illegal dumping on the property. Given relatively shallow groundwater levels in the project area, disposal of demolition materials, wood waste, solid waste, or contaminated soils in the project area should be prohibited.

References:

Maul, Foster, Alongi (MFA). Hydrogeologic Site Assessment Report. Lake Erie Pit Expansion. Bellingham, WA. December 2, 2016.

Maul, Foster, Alongi (MFA). Observation Well Installation. Lake Erie Pit Expansion. Bellingham, WA. September 28, 2017.

Northwest Groundwater Consultants (NGC). Lake Erie Pit Well Recommendations. Coeur d'Alene, Idaho. March 11, 2019

WA Dept of Ecology (WDOE). Water Well Report. Resource Protection Well BJF103. https://ecoloogy.wa.gov/wellconstruction. September 25, 2017.

Wood Environment & Infrastructure Solutions, Inc (Wood). Geologic Hazard Site Assessment. Lake Erie Pit 1 Expansion. Kirkland, WA. August 11, 2022.

Date: 11/22/22 Reviewer: Alan Wald, LHg

EXHIBIT #34

EVERGREEN ISLAND EMAIL & LETTER REGARDING WATERSHED COMPANY RESPONSE TO EVERGREEN ISLAND'S COMMUNICATION OF 11/18/2022 + STRATUM GROUP LETTER

From:	Kyle Loring
To:	Kevin Cricchio
Cc:	Marlene Finley
Subject:	PL16-0056 -- Evergrn Isls response to Watershed Co memo
Date:	Friday, March 3, 2023 11:01:25 AM
Attachments:	Evergrn Isls rspnse to TWC response.pdf

Dear Mr. Cricchio,

I've attached a letter on behalf of Evergreen Islands that addresses the memo that The Watershed Company ("TWC") submitted to Skagit County to respond to Evergreen Islands' November 2022 communication. Attached to that letter is a memo from Dan McShane, the licensed engineering geologist who concludes that, like the earlier Wood consultant report, TWC overlooks that the purpose of the remand from the Board of County Commissioners was to evaluate the proposed mine's potential impacts on the unstable bluffs northwest of the mine site. The TWC document does not mention these bluffs. Instead, it continues to focus on unstable bluffs to the west and southwest of the proposed mine site. Consequently, the applicant hasn't provided a response to Michael Cerbone's March 23, 2021 letter, and that work must yet be completed.

I was surprised that your office didn't notify Evergreen Islands that you had requested, and then received a memo from TWC, and that we had to learn about it through an incidental visit to the County's project website. Since Evergreen Islands is the party that filed the appeal that led to the County's request for a review of the mine's groundwater impacts on bluffs to the northwest, I ask that you keep Evergreen informed of such developments in the future.

Best,
Kyle

Kyle A Loring *(he/him)*
LORING ADVISING PLLC
PO Box 3356 | Friday Harbor, WA 98250
360-622-8060 | www.loringadvising.com

LORING ADVISING

By Email

March 3, 2023

Kevin Cricchio, Senior Planer
Skagit County Planning and Development Services
1800 Continental Place
Mount Vernon, WA 98273
kcricchio@co.skagit.wa.us

Re: File No. PL16-0056 – The Watershed Company Response to Evergreen Islands communication of 11/18/2022 re: Lake Erie Pit

Dear Mr. Cricchio,

I'm submitting this letter and attached analysis from Dan McShane on behalf of Evergreen Islands ("Evergreen") to respond to a memorandum that you received from The Watershed Company ("Response") in response to Evergreen's November 2022 missive. Before addressing the Response, I should mention that Evergreen was disappointed to have to learn about it through the Skagit County Planning & Development Services ("PDS") website. As the party that successfully appealed the inadequate original groundwater reports for the site, Evergreen has a reasonable expectation that it would be informed when the applicant and the County prepare or receive new reports regarding the site's groundwater characteristics. This is particularly true of documents expressly titled "Response to Evergreen Island [sic] communication." We ask that PDS ensure that it communicates such materials to Evergreen in the future.

With regard to the substance of the Response, we have attached a letter from Dan McShane, a licensed engineering geologist and the expert who diagnosed the flaws in the initial groundwater review for the proposed Lake Erie gravel pit, that explains that the Response also ignores the potential for the mine to increase the risk of landslides for the neighborhood to the northwest. Mr. McShane concludes that "I remain very concerned about the potential impacts to groundwater levels and the stability of the bluffs to the northwest of the mine in the absence of an assessment of the mine's impacts on those areas."

Mr. McShane reached this conclusion after identifying the following flaws in the Response and earlier groundwater reviews:

- The Response does not identify or discuss the springs on the bluffs to the northwest of the proposed mine in its review of the earlier reports. These springs, which have never

been evaluated notwithstanding that they lie downgradient of the mine, were the primary reason that the Skagit Board of Commissioners reversed Hearing Examiner approval of the mine. Mr. McShane notes that if recharge to groundwater that feeds these springs is increased, the frequency and magnitude of groundwater-driven landslides will increase. Nonetheless, the Response makes no reference to them, instead discussing unstable slopes to the west and southwest of the proposed mine.

- There are significant discrepancies in the groundwater elevations identified by different applicant reports. While the Response asserts that no significant discrepancies or inaccuracies were found in the data, the water levels measured directly by Northwest Groundwater Consultants were 50 feet and 35 feet lower than those identified on the groundwater contour map produced by Maul Foster Alongi in 2016 and 2017. This large discrepancy casts doubt on the accuracy of the elevations the application presumed for the other wells that were not directly measured.

- The groundwater flow and potential changes to the groundwater flow toward the unstable bluffs has not been evaluated. Ultimately, there are no data regarding groundwater elevations between the proposed mine and the unstable bluffs to the northwest of the mine. The County requested this information nearly two years ago in its March 23, 2021 letter to Bill Wooding, which required an assessment of the following specific site elements:

    - Analysis of the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion and attendant removal of soil and vegetation which could alter groundwater behavior in the vicinity of the mine.

    - Analysis of the presence of springs on the coastal bluff to the northwest of the mine that are at an elevation down gradient of the inferred groundwater level.

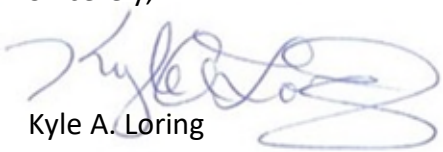
    - Respond to the testimony of the professional geologist [Dan McShane] who identified that the proposed mine expansion will create an increased landslide risk.

The Canyon Environmental Group ("Canyon") proposal that the applicant had obtained to answer these questions could have done so. The applicant inexplicably chose a different consultant who did not carry out the scope Canyon had proposed, and who declined to conduct the analyses that PDS had requested. The Response likewise omits any analysis of groundwater impacts on the bluffs to the northwest.

Absent this requested information, which is essential for answering whether the mine will increase the likelihood that residents to the northwest will suffer from increased landslides, the project cannot move forward. Evergreen therefore requests that PDS reiterate its request to Lake Erie to investigate groundwater flow between the site and the downgradient springs in the bluffs to the northwest, and, if studies conclude that the mine will increase the groundwater flow to those bluffs, whether the increased flow will increase the instability of those bluffs.

If you have any questions, please do not hesitate to contact me at 360-622-8060 or kyle@loringadvising.com.

Sincerely,



Kyle A. Loring

Cc: Marlene Finley, Evergreen Islands

Attachment: Stratum Group Response to The Watershed Company Response

STRATUM GROUP
PO Box 2546, Bellingham, Washington 98227

March 2, 2023

Re: **Response to:**
The Watershed Company Response to Evergreen Islands communication of 11/18/2022

As a licensed engineering geologist who has been part of the Lake Erie gravel pit review for three years, I am offering feedback on The Watershed Company's review of the original groundwater flow assessment that the Board of Commissioners deemed inadequate. Regrettably, The Watershed Company response letter listed as a 'Geologic-Hazard Site Assessment Third Party Review' on the County website does not support moving forward with project review. The Watershed Company did not identify or discuss the springs on the bluffs to the northwest of the proposed mine in the review of the reports. Furthermore, in the review of the groundwater elevations, The Watershed Company did not identify a very large discrepancy in the groundwater elevations between the groundwater reports prepared by Maul Foster Alongi (2016 and 2017) and Northwest Groundwater Consultants (2019). The review also failed to discuss that the Wood (2022) geology hazard site assessment was not responsive to the County's specific requests to "Analyze the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion." These notable omissions prevent the response from being relevant to the necessary review.

Springs northwest of mine

The Commissioners determined that the groundwater flow to the springs located to the northwest of the mine was essential for evaluating project impacts, but it has not been addressed. Maul Foster Alongi provided a Hydrogeologic Site Assessment Report (September 28, 2016). The purpose of that report was to meet the requirements of Skagit County Code 14.16.440(8)(b):

> *(b) A report by a qualified geologist, hydrogeologist or licensed engineer characterizing the area's ground water including, but not limited to, the following information:*
>
> *(i) A description of the geology and hydro-geology of the area including the delineation of aquifer, aquitards, or aquicludes (confining layers), hydrogeologic cross-sections, porosity and horizontal and vertical permeability estimates;*
>
> *(ii) Determination of the direction and velocity of ground water movement, water table contour and potentiometric surface maps (for confined aquifers), if applicable; and*
>
> *(iii) A map containing the limits of the mine, buffer zones, location of all ground water wells within 1 mile distance down gradient from the property boundaries,*

> ***location of all perennial streams and springs****, and definition or specification of locations of aquifer recharge and discharge areas.*

But the Maul Foster Alongi report (2016) did not identify the springs or streams located to the northwest of the property. Subsequent reports by Maul Foster Alongi (2017) and Northwest Groundwater Consultants (2019) also did not identify these springs.

In my comments on the project dated October 12, 2020, I pointed out that groundwater fed springs are located on the slopes to the northwest that were not identified in the Maul Foster Alongi (2016 and 2017) and Northwest Groundwater Consultants (2019) reports. Based on previous work I had done on these slopes, I noted that elevated groundwater levels were a factor in the landslides on these slopes.

Role of groundwater on the stability of the slopes to the northwest

The Wood Geology Hazard Site Assessment (2022) did not identify the springs and made no attempt to assess the groundwater flow to the springs even though this was a specific item requested by Skagit County Planning and Development Services. Wood appears to have been unaware of the groundwater springs. The Wood report used the same groundwater contour map as the Maul Foster Alongi (2017) report. The Wood assessment provided no assessment of the steep bluff areas to the northwest of the mine. The rationale for not assessing the slope was based on the assumption that groundwater does not flow to the bluff. The role of groundwater flow to the bluff remains unevaluated.

I submitted my original comments (October 12, 2020) because I have been on the slopes to the northwest and recognized that groundwater levels from a mid slope area of springs have been and are a major driver of slope instability along the slope area to the northwest of the mine (pictures attached). Groundwater impacts to the stability of the slope to the northwest of the mine is why the headwall of the landslide scarp along the bluff northwest of the mine has recessed approximately 300 feet into the upland area (attached lidar image). The potential change to groundwater flow towards these springs by the removal of the glacial till cover within the proposed mine expansion has still not been evaluated. These springs were not identified in the groundwater assessment, the geology hazard site assessment or the response document.

If recharge to groundwater that feeds these springs is increased, the frequency and magnitude of groundwater driven landslides will increase on these slopes.

Discrepancy in water elevations

While the letter by The Watershed Company stated that they found “no significant discrepancies or inaccuracies in the data”, the letter did not discuss the very large groundwater elevation discrepancy reported between the Maul Foster Alongi (2016 and 2017) reports and the water directly measured at two wells by Northwest Groundwater Consultants (2019). The water levels

measured directly by Northwest Groundwater Consultants were 50 feet and 35 feet lower than the groundwater contour map produced in 2016 and 2017. This large discrepancy strongly suggests that the groundwater elevations of the all of the other wells that were not directly measured are inaccurate and therefore the groundwater contour map is not an accurate portrayal of the groundwater elevations.

The significant difference in groundwater elevations between the 2016/2017 report and the measured elevations in the 2019 report, as well as the lack of recognition of the groundwater discharge locations on the slopes to the northwest, should have been noted in The Watershed Company review, particularly given that the County may be considering the review as a third party review.

Groundwater flow and potential changes of groundwater flow towards the bluffs has not been evaluated

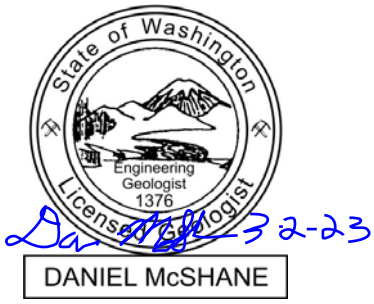
There are no data regarding the groundwater elevations between the proposed mine expansion and the bluffs to the northwest of the mine.

The areas of springs on the slopes to the northwest of the mine have still not been analyzed despite the specific request by Skagit County Planning and Development Services. The proposed scope of work prepared by Canyon Environmental Group and submitted to the County as part of the application process by the applicant has not been completed.

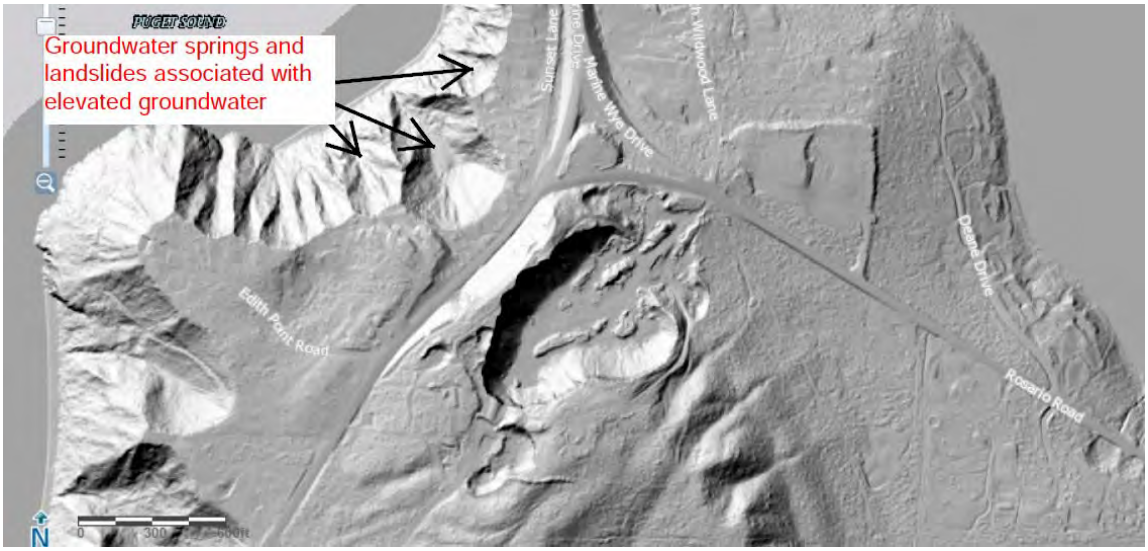
I remained very concerned about the potential impacts to groundwater levels and the stability of the bluffs to the northwest of the mine in the absence of an assessment of the mine's impacts on those areas.

Sincerely yours,
Stratum Group

Dan McShane, L.E.G., M.Sc.
Licensed Engineering Geologist



Site of recent sand blowout from perched groundwater just above the silt clay layer at bluff northwest of the mine.



Lidar image of groundwater induced slide areas and mine area

EXHIBIT #35

REVISED THIRD PARTY REVIEW OF GEOLOGIC HAZARD SITE ASSESSMENT & RESPONSE TO EVERGREEN ISLAND'S LETTER DATED 11/18/2022 (RECEIVED MARCH 31, 2023)

THE WATERSHED COMPANY

SCIENCE & DESIGN

RECEIVED
MAR 31 2023
SKAGIT COUNTY
PDS

Lake Erie Gravel Pit – Third Party Review

P#: **19164** Site Address: **13500 Rosario Road (Fidalgo Island)**
Property Owner(s): **Lake Erie Trucking, LLC**
Project Description: **Lake Erie Gravel Pit (Surface Mine)**

Notes:

Reviewed the hydrogeologic reports provided (see references), NRCS local soils descriptions, and water well logs of record for the general vicinity.

Project is a proposed expansion of gravel pit excavation (surface mine) and hauling in the vicinity of Lake Erie on Fidalgo Island, Skagit County. The project proposes to manage stormwater by capturing site runoff for infiltration. Proposed excavation is planned to be above the inferred ground water elevation of a local aquifer and no dewatering is anticipated. There are approximately 70 wells of record within a one-mile radius of the proposed surface mine, approximately 16 wells appear to be downgradient of the site (MFA, 2016). There is no record of existing contamination at the site.

A resource protection well (BJF103) was drilled for the project in 2017. The ground surface elevation for the well is 445.6 ft msl (MFA, 2017). The top of casing elevation for the well is 448.4 ft msl (NGC, 2019). The well log documents the approximately 20-foot-thick layer of semi-consolidated brown to gray clay, at depths of 189 to 209 ft. (259.4 to 239.4 msl) overlying water bearing strata at various depths (WDOE, 2017). This clay layer, or aquitard, serves as a protective element for the underlying aquifer and reduces the risk of groundwater contamination from surface sources. Static water level in the well was 255.4 ft btc (193 ft msl) on 9/19/2017 (MFA, 2017). The observed water level reflects commingled hydraulic heads in a resource protection well without screening (open hole at a depth of 277 ft) and undeveloped hydraulic continuity with the aquifer.

The inferred groundwater surface elevation in the aquifer, based on comparisons of static water levels in surrounding wells, is about 190 feet msl (MFA, 2016). The proposed project includes excavation to a bottom elevation of 250 ft. msl (Wood, 2022). The general direction of groundwater discharge in the local aquifer is north/northeast.

Surface soils in the project area include the Catla, Keystone, and LaConner soil series and topsoil depths generally range from 16 to 24 inches, grading into granular subsoils (NRCS, 2007)

SCC 14.24.340: Aquifer recharge areas impact mitigation

Based on project information available to date, the risk of impacts to aquifer recharge and groundwater quality due to the proposed surface mine appears to be generally low. Given some uncertainties in using

750 Sixth Street South | Kirkland, WA 98033
P 425.822.5242 | f 425.827.8136 | watershedco.com

inferred water level observations of commingled hydraulic heads, variability in land elevations, and different surface mine operations, several mitigations measures should be considered to further reduce potential impacts to aquifer recharge and groundwater quality. These proposed mitigation measures are as follows:

1. Surface soils, particularly topsoil, excavated at depths of 24 inches or more from mined areas should be stockpiled and replaced on exposed areas as excavation is completed. Topsoil and subsoils should be stockpiled and applied separately to avoid mixing different soil fertilities. Stockpiled soils should not be sold, or given away, or otherwise removed, or used for screening berms. These soils provide important functions for protecting water quality of surface infiltration and promoting revegetation of the site.
2. The elevation of subsurface strata may vary across the site and excavation to elevations of 250 ft. msl may encounter the brown/gray clay aquitard overlying the deeper aquifer. This layer should not be excavated or disturbed in order to maintain protection of aquifer storage and existing wells from potential disturbance or contamination.
3. It is recommended that resource protection well BJF103 be monitored over the life of the project by measuring water level and submitting a water quality sample (drinking water standards) at least once a year. This information provides an essential baseline for evaluating future changes in groundwater conditions.
4. It is recommended that the project area, particularly haul roads, have secure site access controls, including fencing and gates as needed, to prevent unauthorized or illegal dumping on the property. Given relatively shallow groundwater levels in the project area, disposal of demolition materials, wood waste, solid waste, or contaminated soils in the project area should be prohibited.

References:

Maul, Foster, Alongi (MFA). Hydrogeologic Site Assessment Report. Lake Erie Pit Expansion. Bellingham, WA. December 2, 2016.

Maul, Foster, Alongi (MFA). Observation Well Installation. Lake Erie Pit Expansion. Bellingham, WA. September 28, 2017.

Northwest Groundwater Consultants (NGC). Lake Erie Pit Well Recommendations. Coeur d'Alene, Idaho. March 11, 2019

WA Dept of Ecology (WDOE). Water Well Report. Resource Protection Well BJF103. https://ecoloogy.wa.gov/wellconstruction. September 25, 2017.

Wood Environment & Infrastructure Solutions, Inc (Wood). Geologic Hazard Site Assessment. Lake Erie Pit 1 Expansion. Kirkland, WA. August 11, 2022.

Date: 11/22/22 Reviewer: Alan Wald, LHg

MEMORANDUM

THE WATERSHED COMPANY

Date: January 18, 2023
To: Kevin Cricchio, Skagit County Planning
From: Alan Wald, LHG. The Watershed Company
Project Name: Skagit County Lake Erie Pit Review
Project Number: 210231.9

Subject: Response to Evergreen Islands communication of 11/18/2022 re: Lake Erie Pit

As per your request of 12/20/22, I have reviewed the comment letters from Loring Advising and the Stratum Group concerning potential groundwater issues and proposed expansion of the Lake Erie Pit. I have included (attached) the 11/22/2022 third-party review report we provided Skagit County regarding the proposed project.

The main concerns raised in the Evergreen Island communication appear to be the adequacy of the groundwater flow assessment and potential impacts to bluff stability west and northwest of the proposed pit expansion.

The methods and results of the groundwater flow assessment are presented in several reports:

Maul, Foster, Alongi (MFA). Hydrogeologic Site Assessment Report. Lake Erie Pit Expansion. Bellingham, WA. December 2, 2016.

Maul, Foster, Alongi (MFA). Observation Well Installation. Lake Erie Pit Expansion. Bellingham, WA. September 28, 2017.

Northwest Groundwater Consultants (NGC). Lake Erie Pit Well Recommendations. Coeur d'Alene, Idaho. March 11, 2019. And

WA Dept of Ecology (WDOE). Water Well Report. Resource Protection Well BJF103. https://ecoloogy.wa.gov/wellconstruction. September 25, 2017.

The Wood Environment & Infrastructure Solutions, Inc (Wood). Geologic Hazard Site Assessment. Lake Erie Pit 1 Expansion. Kirkland, WA. August 11, 2022, uses the aquifer properties and groundwater flow characterization from these reports.

I revisited the methods and results of the aquifer characterization and groundwater flow analysis in the groundwater flow assessment and found no significant discrepancies or

inaccuracies in the data collection, hydrogeologic analysis, or discussion that would question the study results. The lithology is reasonably consistent with the well logs, the groundwater levels were developed from a comprehensive mass well measurement, and the flow paths were plotted perpendicular to the groundwater surface contours. The aquifer is well characterized at recorded depths and static water levels. The prevailing groundwater flow path is to the north and northeast of the proposed project.

Bluff areas to the west and southwest of the proposed project, including the Dodoson Canyon Springs, are 800 to 1,000 feet from the project with base elevations (below the scarps) of about 200 ft. msl. Based on documented groundwater surface elevations and local stratigraphy, it is likely that groundwater seepage is from the regional aquifer. I found no apparent reason to conclude the proposed project would change the rate or volume of groundwater discharge from seepage on the bluffs.

Attachment.

EXHIBIT #36

NOTICE OF PUBLIC HEARING (PUBLISHED ON 6/8/2023), NEIGHBOR LABELS, & PARTIES OF RECORD

NOTICE OF PUBLIC HEARING

THE SKAGIT COUNTY HEARING EXAMINER WILL HOLD A PUBLIC HEARING ON **WEDNESDAY, June 28, 2023**, AT **1:00 PM** OR SOON THEREAFTER FOR THE FOLLOWING:

PUBLIC HEARING

Hearing to review the remanded items required by the Hearing Examiner on March 9, 2021 for Special Use Permit Application PL16-0556 submitted by Lake Erie Pit 1, LLC requesting the expansion of an existing gravel/sand mining operation from 17.78 acres to approximately 53.5 acres. Per the direction of the Hearing Examiner, the applicant was required to prepare a Geologically Hazardous Area Site Assessment associated with the steep coastal area located to the west/northwest of the mine and prepare a Geologically Hazardous Mitigation Area Plan. The requested items were submitted on August 12, 2022 and determined complete on January 18, 2023 following a third-party review by The Watershed Company. The subject site is located within the Rural Resource-Natural Resource Lands (RRc-NRL) Zoning/Comprehensive Plan Designated Area and designated within the Mineral Resource Overlay.

LOCATION OF PROPOSED DEVELOPMENT:

The proposed mining expansion is located south of the intersection of Rosario Road and Marine Drive, Fidalgo Island, within a portion of Section 11, Township 34 North, Range 01 East, Willamette Meridian situated within unincorporated Skagit County, Washington.

SUBJECT PARCELS: Existing Mine: P19108, P19162, & P19165; Expansion to Mine: P19158, P90028, P19164, P19155, P19161; Contiguous Parcels (Same Ownership): P19168, & P19163

APPLICANT/ CONTACT:

Lake Erie Pit 1 LLC
Attn: Bill Wooding
13540 Rosario Road
Anacortes, WA 98221

SKAGIT COUNTY PLANNING AND DEVELOPMENT SERVICES
1800 CONTINENTAL PLACE
MOUNT VERNON, WASHINGTON 98273
(360) 416-1320

Hearings are now being held hybrid, meaning in-person and virtual (via Zoom). To participate in the public hearing virtually you can call +1(253)215-8782, US (Tacoma), or +1(719)359-4580 US, **Meeting ID: 812 7077 5954# US (Passcode: 728120)**, or to join via video please visit: https://us06web.zoom.us/j/81270775954?pwd=YzdwSmxLeXp6cDdCbmFXK0ZSVWNRdz09

Log in information is also available on the Hearing Examiner website located at www.skagitcounty.net under the "*Department Directory,*" "Hearing Examiner."

If you would like to speak at the hearing, please contact either Maria Reyna at (360) 416-1150, email mariar@co.skagit.wa.us; Keith Luna at (360) 416-1152, email kluna@co.skagit.wa.us; or Russell Walker at (360) 416-1154, email russow@co.skagit.wa.us to sign up.

Comments must be received by Planning and Development Services **no later than 4:30 PM Tuesday, June 27, 2023, or be presented at the public hearing**. E-mail comments may be submitted with the PDS website under the "*Public Notices and Comment Opportunities"* tab or to the Office of the Hearing Examiner. **Staff contact**: Kevin Cricchio, AICP, ISA, Senior Planner; (360) 416-1423

PIT I LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

PIT I LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

PIT I LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

PIT I LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

WOODING BRENT & PIT I LLC
C/O LAKER ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

PIT I LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

PIT I LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

PIT I LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

PIT I LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

MULLEN BRUCE
MULLEN LISA
13840 EAGLECREST LN
ANACORTES, WA 98221

PERANTEAU NICHOLAS
PERANTEAU JANELLE
13736 SEAVIEW WAY
ANACORTES, WA 98221

BALL THEODORE FRANCIS
BALL MARIA D
13614 ORCA LANE
ANACORTES, WA 98221

CHIDLEY CHRISTOPHER R
CHIDLEY SHYLA
4014 WINDCREST LANE
ANACORTES, WA 98221

HOLLAND JAMES W & HOLLAND SARA J
4017 WINDCREST LN
ANACORTES, WA 98221

DODDRIDGE WILLIAM SCOTT
15732 TUSTIN VILLAGE WAY
TUSTIN, CA 92780

MADDEN PHILIP W & MADDEN LINDA H
13754 ROSARIO RD
ANACORTES, WA 98221

ROSARIO ROAD LLC
13746 ROSARIO RD
ANACORTES, WA 98221

WEEKS ANNETTE M TRUST
WEEKS ROBERT G TRUST
13746 ROSARIO RD
ANACORTES, WA 98221

DENT LIVING TRUST
4140 EDITH POINT ROAD
ANACORTES, WA 98221

LAKE ERIE SHOP LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

LAKE ERIE SHOP LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

MERRIFIELD FAMILY TRUST &
MERRIFIELD WILLIAM F TRUSTEE
MERRIFIELD BARBARA ANN TRUSTEE
4203 SHARPE LN
ANACORTES, WA 98221

BILLOW ROBERT & BILLOW LORA
13630 ORCA LN
ANACORTES, WA 98221

HOFFMAN TRUST
HOFFMAN MICHAEL R TRUSTEE
HOFFMAN KERI B TRUSTEE
13654 ORCA LANE
ANACORTES, WA 98221

TOSHACH BYNUM LIVING TRUST
TOSHACH STEWART C TRUSTEE
BYNUM ELLEN TRUSTEE
PO BOX 909
LACONNER, WA 98257

VAUGHAN RAYMOND C
13558 ORCA LN
ANACORTES, WA 98221

ORR CHRISTOPHER ADAIR
ORR ROBIN RUGELEY
13762 ROSARIO ROAD
ANACORTES, WA 98221

DEL MAR COMMUNITY SERVICE INC
1004 COMMERCIAL AVE #1111
ANACORTES, WA 98221

NORTHWEST FIBER LLC DBA ZIPLY
ATTN MICHELE KRUGER
PO BOX 637
GRAPEVINE, TX 76099

CALVERT WILSON D & CALVERT LORI A
13507 ROSARIO RD
ANACORTES, WA 98221

NORRIS THOMAS E & NORRIS SANDRA B
13280 BURROWS VIEW LANE
ANACORTES, WA 98221

PETTERSEN PETER A & PETTERSEN MICHELLE A
13244 BURROWS VIEW LN
ANACORTES, WA 98221

LAKE ERIE SHOP LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

LAKE ERIE SHOP LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

LAKE ERIE SHOP LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

DE VRIES CASE R
DE VRIES ANNALISA M
13114 SOUTH WILDWOOD LANE
ANACORTES, WA 98221

ATTERBERRY ROBERT MILTON II &
ATTERBERRY BARBARA
13841 EAGLE CREST LN
ANACORTES, WA 98221

DEL MAR COMMUNITY SERVICE INC
1004 COMMERCIAL AVE #1111
ANACORTES, WA 98221

MERRIFIELD FAMILY TRUST &
MERRIFIELD WILLIAM F TRUSTEE
MERRIFIELD BARBARA ANN TRUSTEE
4203 SHARPE LN
ANACORTES, WA 98221

KENNERLY REVOCABLE TRUST
KENNERLY STEPHEN L TRUST
KENNERLY MARLENE TRUSTEE
13634 ORCA LN
ANACORTES, WA 98221

BATES KENNETH L
BATES SKYE
13728 SEAVIEW WAY
ANACORTES, WA 98221

WECHEZAK ARLENE ROSE
3994 WINDCREST LN
ANACORTES, WA 98221

TOSHACH BYNUM LIVING TRUST
TOSHACH STEWART C TRUSTEE
BYNUM ELLEN TRUSTEE
PO BOX 909
LACONNER, WA 98257

BUSH MATTHEW R
BUSH HEATHER N
13526 ORCA LN
ANACORTES, WA 98221

DODDRIDGE WILLIAM SCOTT
15732 TUSTIN VILLAGE WAY
TUSTIN, CA 92780

WIEMAN KIMBERLY
WIEMAN CORY
13523 ROSARIO ROAD
ANACORTES, WA 98221

HULTON DAVID C
HULTON JEANNIE R
4141 EDITH POINT ROAD
ANACORTES, WA 98221

BURROWS FULTON LLC
PO BOX 239
SEAHURST, WA 98062

WINKLER LIVING TRUST
WINKLER THOMAS R TRUSTEE
WINKLER PATRICIA M TRUSTEE
13664 ROSARIO ROAD
ANACORTES, WA 98221

PETTERSEN PETER A & PETTERSEN MICHELLE A
13244 BURROWS VIEW LN
ANACORTES, WA 98221

JD1NWA LLC
20302 E CLOUD ROAD
QUEEN CREEK, AZ 85142

DETTMAN DAVID
FISH HEIDI
13158 SUNSET LN
ANACORTES, WA 98221

SKAGIT COUNTY
1800 CONTINENTAL PLACE
MOUNT VERNON, WA 98273

HUBBARD TRUST & TEETERS MARTHA ILENE HUBBARD
PO BOX 1415
APTOS, CA 95001

SAN JUAN PRESERVATION TRUST
PO BOX 759
FRIDAY HARBOR, WA 98250

SKAGIT COUNTY
1800 CONTINENTAL PL
MOUNT VERNON, WA 98273

MERRIFIELD FAMILY TRUST &
MERRIFIELD WILLIAM F TRUSTEE
MERRIFIELD BARBARA ANN TRUSTEE
4203 SHARPE LN
ANACORTES, WA 98221

MCIRVIN JEFFREY S
MCIRVIN ELLEN L
3560 KNOWLES RD
WENATCHEE, WA 98801

RUMBALL KAREN L
13616 DAYBREAK LANE
ANACORTES, WA 98221

KOPKOWSKI JAMES A & KOPKOWSKI
PAMELA K
602 BENTGRASS CT
GRIFFIN, GA 30223

ROSARIO ROAD LLC
13746 ROSARIO RD
ANACORTES, WA 98221

DENT LIVING TRUST
4140 EDITH POINT ROAD
ANACORTES, WA 98221

DENT LIVING TRUST
4140 EDITH POINT ROAD
ANACORTES, WA 98221

REISNER THEODORE A & REISNER
BARBARA R
13495 ROSARIO RD
ANACORTES, WA 98221

FULTON DIANE C
SMITH BRADLEY A
14121 211 ST SE
SNOHOMISH, WA 98296

JOHN SAM PANISERRIL
JOHN ANI KATTAPURAM
13672 ROSARIO ROAD
ANACORTES, WA 98221

BURROWS FULTON LLC
PO BOX 239
SEAHURST, WA 98062

JD1NWA LLC
20302 E CLOUD ROAD
QUEEN CREEK, AZ 85142

STOULIG LAWRENCE WALTER III
19 SOUTHGATE AVE
ANNAPOLIS, MD 21401

LAKE ERIE SHOP LLC
C/O LAKE ERIE TRUCKING
13540 ROSARIO RD
ANACORTES, WA 98221

SEELYE MARVIN V & DOBBS LINDA RAE
13136 SUNSET LN
ANACORTES, WA 98221

STOULIG LAWRENCE WALTER III
19 SOUTHGATE AVE
ANNAPOLIS, MD 21401

PIT I LLC

PIT I LLC

PIT I LLC

PIT I LLC

WOODING BRENT & PIT I LLC

PIT I LLC

PIT I LLC

PIT I LLC

PIT I LLC
13835 ROSARIO ROAD
ANACORTES, WA 98221

PIT I LLC

MULLEN BRUCE
13840 EAGLECREST LANE
ANACORTES, WA 98221

PERANTEAU NICHOLAS
13736 SEAVIEW WAY
ANACORTES, WA 98221

BALL THEODORE FRANCIS
13614 ORCA LANE
ANACORTES, WA 98221

CHIDLEY CHRISTOPHER R
4014 WINDCREST LANE
ANACORTES, WA 98221

HOLLAND JAMES W & HOLLAND SARA J
4017 WINDCREST LANE
ANACORTES, WA 98221

DODDRIDGE WILLIAM SCOTT

MADDEN PHILIP W & MADDEN LINDA
13754 ROSARIO ROAD
ANACORTES, WA 98221

ROSARIO ROAD LLC

WEEKS ANNETTE M TRUST
13746 ROSARIO ROAD
ANACORTES, WA 98221

DENT LIVING TRUST

LAKE ERIE SHOP LLC

LAKE ERIE SHOP LLC

MERRIFIELD FAMILY TRUST &
MERRIFIELD WILLIAM F TRUSTEE

BILLOW ROBERT & BILLOW LORA
13630 ORCA LANE
ANACORTES, WA 98221

HOFFMAN TRUST
13654 ORCA LANE
ANACORTES, WA 98221

TOSHACH BYNUM LIVING TRUST
3998 WINDCREST LANE
ANACORTES, WA 98221

VAUGHAN RAYMOND C
13558 ORCA LANE
ANACORTES, WA 98221

ORR CHRISTOPHER ADAIR
13762 ROSARIO ROAD
ANACORTES, WA 98221

DEL MAR COMMUNITY SERVICE INC

NORTHWEST FIBER LLC DBA ZIPLY

CALVERT WILSON D & CALVERT LORI A
13507 ROSARIO ROAD
ANACORTES, WA 98221

NORRIS THOMAS E & NORRIS SANDRA
13280 BURROWS VIEW LANE
ANACORTES, WA 98221

PETTERSEN PETER A & PETTERSEN MICHELLE A

LAKE ERIE SHOP LLC
13540 ROSARIO ROAD
ANACORTES, WA 98221

LAKE ERIE SHOP LLC

LAKE ERIE SHOP LLC

DE VRIES CASE R
13114 SOUTH WILDWOOD LANE
ANACORTES, WA 98221

ATTERBERRY ROBERT MILTON II &
ATTERBERRY BARBARA
13841 EAGLECREST LANE
ANACORTES, WA 98221

DEL MAR COMMUNITY SERVICE INC

MERRIFIELD FAMILY TRUST &
MERRIFIELD WILLIAM F TRUSTEE

KENNERLY REVOCABLE TRUST
13634 ORCA LANE
ANACORTES, WA 98221

BATES KENNETH L
13728 SEAVIEW WAY
ANACORTES, WA 98221

WECHEZAK ARLENE ROSE
3994 WINDCREST LANE
ANACORTES, WA 98221

TOSHACH BYNUM LIVING TRUST

BUSH MATTHEW R
13526 ORCA LANE
ANACORTES, WA 98221

DODDRIDGE WILLIAM SCOTT
13562 ISLEWOOD DRIVE
ANACORTES, WA 98221

WIEMAN KIMBERLY
13523 ROSARIO ROAD
ANACORTES, WA 98221

HULTON DAVID C
4141 EDITH POINT ROAD
ANACORTES, WA 98221

BURROWS FULTON LLC
13262 BURROWS VIEW LANE
ANACORTES, WA 98221

WINKLER LIVING TRUST
13664 ROSARIO ROAD
ANACORTES, WA 98221

PETTERSEN PETER A & PETTERSEN MICHELLE A
13244 BURROWS VIEW LANE
ANACORTES, WA 98221

JD1NWA LLC

DETTMAN DAVID
13158 SUNSET LANE
ANACORTES, WA 98221

SKAGIT COUNTY

HUBBARD TRUST & TEETERS MARTHA ILENE HUBBARD

SAN JUAN PRESERVATION TRUST

SKAGIT COUNTY

MERRIFIELD FAMILY TRUST &
MERRIFIELD WILLIAM F TRUSTEE
4203 SHARPE LANE
ANACORTES, WA 98221

MCIRVIN JEFFREY S
13787 SEAVIEW WAY
ANACORTES, WA 98221

RUMBALL KAREN L
13616 DAY BREAK LANE
ANACORTES, WA 98221

KOPKOWSKI JAMES A & KOPKOWSKI PAMELA K

ROSARIO ROAD LLC
13758 ROSARIO ROAD
ANACORTES, WA 98221

DENT LIVING TRUST

DENT LIVING TRUST
4140 EDITH POINT ROAD
ANACORTES, WA 98221

REISNER THEODORE A & REISNER BARBARA R
13495 ROSARIO ROAD
ANACORTES, WA 98221

FULTON DIANE C

JOHN SAM PANISERRIL
13672 ROSARIO ROAD
ANACORTES, WA 98221

BURROWS FULTON LLC
13256 BURROWS VIEW LANE
ANACORTES, WA 98221

JD1NWA LLC
13240 BURROWS VIEW LANE
ANACORTES, WA 98221

STOULIG LAWRENCE WALTER III
13650 ROSARIO ROAD
ANACORTES, WA 98221

LAKE ERIE SHOP LLC

SEELYE MARVIN V & DOBBS LINDA RAE
13136 SUNSET LANE
ANACORTES, WA 98221

STOULIG LAWRENCE WALTER III

Parties of Record for Special Use Permit PL16-0556

Name	Email	Address
Aaron Bertoni	aaronbertoni@gmail.com	13787 Seaview Way, Anacortes, WA 98221
Abby Jacobs	abbyjacobs@live.com	13159 Deane Drive, Anacortes, WA 98221
Amy Hong	amyleehong@gmail.com	13964 Biz Point Road, Anacortes, WA 98221
Andrew Culbertson	mail@culbertsonmarine.com	5909 Campbell Lake, Anacortes, WA 98221
Andrew Klingman	klingman2@comcast.net	12888 S Wildwood lane, Anacortes, WA 98221
Andy Dunn	adunn@rh2.com	22722 29th Drive SE, Suite 210, Bothell, WA 98021
Anton & Margaret Kerkhov	amsv@comcast.net	13843 Seaview Way, Anacortes, WA 98221
Arlene French	a_bfrench@msn.com	1411 8th Street, Anacortes, WA 98221
Arlene Wechezak PHD	wechezak@fidalgo.net	3994 Windcrest Lane, Anacortes, WA 98221
Arsene de Conde	arsene2conde@gmail.com	14055 Madrone Drive, Anacortes, WA 98221
Asa Deane	asa@friendsoftheacfl.org	PO Box 2213, Anacortes, WA 98221
Asif and Regina Zaheer	az91001@yahoo.com	4900 Paisley Place, Anacortes, WA 98221
Ben Kim	kimb1g@yahoo.com	12912 Sunset Lane, Anacortes, WA 98221
Bill Calvert	billcontheroad@gmail.com	
Bobbie Bracht	kabbjb@comcast.net	12867 S. Wildwood Lane, Anacortes, WA 98221
Brent Melvin	Melvins@comcast.net	1603 41 Street, Anacortes, WA 98221
Brian Wetchler	brwetcher@gmail.com	none
Brinkley Meyers	Brinkley.m.meyers@gmail.com	13650 Rosario Road, Anacortes, WA 98221
Bruce Wick	cspofford@seanet.com	3429 Green Cliffs Road, Anacortes, WA 98221
Budd Westcott	bud.westcott@dnr.wa.gov	
Callie Kathleen Martin	littleswimmergirl@gmail.com	6407 Dow Lane, Anacortes, WA 98221
Carol Bordin	wetlands2save@gmail.com	PO Box 3034, Anacortes, WA 98221
Carol Ehlers	None	1 Dunbar Ct, Port Ludlow, WA 98365
Carrie King	carejking@gmail.com	1417 6th St, Anacortes, WA 98221
Caylen Beaty	caylen.beaty@gmail.com	None
Charles Trafton	None	13971 Trafton Road, Anacortes, WA 98221
Chelsea Montgomery-Duban Waech	chelseaaustin.md@gmail.com	14121 Devin Cliff Lane, Anacortes, WA 98221
Chris Chidley	crchidley@hotmail.com	4014 Windcrest Lane, Anacortes, WA 98221
Christie Stewart Stein	jsteinwa@earthlink.net	16384 Donnelly Road, Mount Vernon, WA 98221
Christy Lancaster	lancasterchristy@hotmail.com	3244 Biz Point Road, Anacortes, WA 98221
Curtis Huber	curthuber@gmail.com	3361 Biz Point Road, Anacortes, WA 98221
Dalrea Estvold	estvolddelrae53@gmail.com	4134 Sharpe Road, Anacortes, WA 98221

Dan Harris	fidalgocowboy@msn.com	
Dan McShane	mcshanedan@gmail.com	
Dave Dettman	dave98284@hotmail.com	13158 Sunset Drive, Anacortes, WA 98221
Dave Sem	dave.sem@outlook.com	1014 11th Street, Anacortes, WA 98221
David Hulton	dchulton@gmail.com	4141 Edith Point Road, Anacortes, WA 98221
Dean Millican	deanmillican@comcast.net	3769 Biz Point Road, Anacortes, WA 98221
DeAnna Claus	deannalclaus@yahoo.com	3284 Biz Point Road, Anacortes, WA 98221
Debbie Wheelock	debbiewheelock@gmail.com	none
Debra Brodie	breema@comcast.net	3906 Bay Lane, Anacortes, WA 98221
Del Mar Community Services	Meg@delmarcommunity.com	1004 Commercial Ave, Anacortes, WA 98221
Dennis and Elizabeth Lengel	lengels@mac.com	12901 S Wildwood Lane, Anacortes, WA 98221
Dennis Duban	Dd@dldcpas.com	14121 Devin Cliff Lane, Anacortes, WA 98221
Diane Hintz	danddhintz@gmail.com	3625 Green Cliffs Road, Anacortes, WA 98221
Dominic Weachter	dominic.waechter@evrealestate.com	14121 Devin Cliff Lane, Anacortes, WA 98221
Don Knutsen	dgknute@gmail.com	12157 Havekost Road, Anacortes, WA 98221
Don Nielsen	dnielsen@lumenal.com	
Donald Caldwell	skyisland293@msn.com	PO Box 786, Anacortes, WA 98221
Doug Gresham	doug.gresham@ecy.wa.gov	3190 160th Ave SE, Bellevue, WA 98008
Elisabeth Raff	lissielizz.is@gmail.com	3702 Biz Point Road, Anacortes, WA 98221
Elizabeth McGowan	bmcgowan014@gmail.com	4117 D Ct. Anacortes, WA 98221
Elizabeth Sullivan	libbyesullivan@gmail.com	none
Ellen Bynum	friends@fidalgo.net	110 N. Frist Street Suite C, Mount Vernon, WA 98221
Eugene Hong	eugenehong1@gmail.com	13964 Biz Point Road, Anacortes, WA 98221
Frank Jeretzky	None	13664 Rosario Road, Anacortes, WA 98221
Gail Buchanan	gsterling4444@yahoo.com	14114 Ervine Road, Anacortes, WA 98221
Haley Fenton	haleyraefenton@gmail.com	11315 Whistle Lake Road, Anacortes WA 98221
Heidi Fish	rev.heidi.fish@gmail.com	13158 Sunset Lane, Anacortes, WA 98221
Hollis Crapo	hollis.crapo@dnr.wa.gov	
Jack Christopher Mitchell	cmhere@mac.com	13301 Deane Drive, Anacortes, WA 98221
Jake Olliffe	jandsolliffe@aol.com	13874 Polaris Pt. Lane, Anacortes, WA 98221
James and Karen Haeberlin	cruelladuville@gmail.com	13396 Rosario Road, Anacortes, WA 98221
James and Sara Holland	taboulih@comcast.net	4017 Windcrest Lane, Anacortes, WA 98221
James B Casey Jr	jc.audax@gmail.com	7171 Island View, Anacortes, WA 98221
James Bolton	boltonfamily@comcast.net	None

Jan Robinson	janhrobinson@comcast.net	PO Box 924, Anacortes, WA 98221
Janelle Wallace	mangy.moose@comcast.net	4063 Edith Point Road, Anacortes, WA 98221
Janet and Roger Pearce	janetleslie45@gmail.com	3692 Biz Point Road, Anacortes, WA 98221
Janet Gomes	gomesjan@comcast.net	4036 Edith Point Road, Anacortes, WA 98221
Janet Hersey and Jay Ham	jan.hersey@comcast.net	3153 Biz Point Road, Anacortes, WA 98221
Janet Wilken	dance4life79@gmail.com	3859 Biz Point Road, Anacortes, WA 98221
Jay Ham & Jan Hersey	jay.ham@comcast.net	3153 Biz Point Road, Anacortes, WA 98221
Jeffery Mullins	ffej49@yahoo.com	13890 Rosario Road, Anacortes, WA 98221
Jessie Brown	jessb901@yahoo.com	13060 South Wildwood Lane, Anacortes, WA 98221
Jill Serbousek	jcserbousek@gmail.com	13868 Polaris Point Lane, Anacortes, WA 98221
Jim and Janet Casey	janetwcasey@gmail.com	11592 Point Place, Anacortes, WA 98221
Jim Laurel	jimlaurel@comcast.net	3918 Bay Lane, Anacortes, WA 98221
John and Susan Christoferson	christoferson@comcast.net	13886 Rosario Road, Anacortes, WA 98221
John Buchanan	jsb855@gmail.com	1411 Ervine Road, Anacortes, WA 98221
John Cooper	jtc27@hotmail.com	21345 Egret Place, Mount Vernon, WA 98274
John Dahl	none	5330 Campbell Lake Road, Anacortes, WA 98221
John Day	Jday0730@gmail.com	
John E Stein	jsteinwa@comcast.net	16384 Donnelly Road, Mount Vernon, WA 98221
John Mickelwait	jsmickelwait@gmail.com	14206 Cove Court, Anacortes, WA 98221
John Raff	ssx3combat@gmail.com	3702 Biz Point Road, Anacortes, WA 98221
John Shannon	bythesea8c@aol.com	12954 Sunset Lane, Anacortes, WA 98221
John Timothy Shannon	tim@mtbakerproducts.com	12954 Sunset Lane, Anacortes, WA 98221
Jon Schmidt	jonsphoto@comcast.net	3740 Birch Way, Anacortes, WA 98221
Judy and Michael Roth	legato48@hotmail.com	14098 Ervine Road, Anacortes, WA 98221
Judy Hammer	jh_98221@yahoo.com	PO Box 1478, Anacortes, WA 98221
Julianne Hamilton	juliannehamilton@comcast.net	3769 Biz Point Road, Anacortes, WA 98221
Julie Gallagher	Juliegal@gmail.com	4360 Sharpe Road, Anacortes, WA 98221
Kaaren Malson	None	13337 Deane Drive, Anacortes, WA 98221
Karla Tibbetts	karlatibbetts19@gmail.com	none
Karrie Jayne Pike	rkpike@gmail.com	13835 Seaview Way, Anacortes, WA 98221
Kate Clark	kateclarkprojects@gmail.com	
Kate Scott	scottkat13@gmail.com	11330 Whistle Lake Road, Anacortes, WA 98221
Kathleen Lorence-Flanagan	tomflanagan@comcast.net	2005 10th Street, Anacortes, WA 98221
Kathryn Alexandra	kalexandra@comast.net	4311 Ginnett Road, Anacortes, WA 98221

Keith Brachtjo	rocky69d@gmail.com	12867 S. Wildwood Lane, Anacortes, WA 98221
Ken Noltensmeyer	heidren@comcast.net	3820 Biz Point Road, Anacortes, WA 98221
Kevin Montgomery-Duban	devinhevn@gmail.com	14121 Devin Cliff Lane, Anacortes, WA 98221
Kim and Paul Thorne	thorne@thornemetals.com	13751 Day Break lane, Anacortes, WA 98221
Kimberly Cauvel	kcauvel@skagitpublishing.com	None
Konrad Kurp	konradn7qcdkurp@gmail.com	6920 Salmon Beach Road, Anacortes, WA 98221
Krysta Verbarebdse	krysta@srvconstruction.com	6192 Campbell Lake Road, Anacortes, WA 98221
kyle Loring	kyle@loringadvising.com	PO Box 3356, Friday Harbor, WA 98250
L H vanHaagen	lvanhaagen@gmail.com	14483 Jura Lane, Anacortes, WA 98221
Laura Rath	laurakathryn.is@gmail.com	6802 Big Cedar Lane, Anacortes, WA 98221
Laurie Sherman	Shermanpt@gmail.com	4596 Ginnett Road, Anacortes, WA 98221
Lawrence Stoulig	lars.stoulig@gmail.com	13650 Rosario Road, Anacortes, WA 98221
Leif Carey-Odden	Leif_carey@yahoo.com	3021 Cherokee Lane, Anacortes, WA 98221
Leslie and Jon Ostlund	ljostlund@icloud.com	3161 Biz Point Road, Anacortes, WA 98221
Libby Grage	Libbyb@cityofanacortes.org	none
Lillian Raff	notkidn@aol.com	3702 Biz Point Road, Anacortes, WA 98221
Linda Dobbs	lraedobbs@outlook.com	13136 Sunset Lane, Anacortes, WA 98221
Louis Gastellum	egastellum34@gmail.com	14451 Ashley Place, Anacortes, WA 98221
Lynn Rumball	ehayko92@gmail.com	13616 Day Break Lane, Anacortes, WA 98221
Mac Madenwald	pangaeamac@hotmail.com	12978 Sunset Lane, Anacortes, WA 98221
Marcel Schwarb	cascadepass@earthlink.net	14004 Biz Point Lane, Anacortes, WA 98221
Margaret Colony	mcolony@wavecable.com	3274 Biz Point Road, Anacortes, WA 98221
Mark Backlund	otterhouse@comcast.net	3151 Biz Point Road, Anacortes, WA 98221
Mark Raphael	mmeraphael@gmail.com	3852 Biz Point Road, Anacortes, WA 98221
Marlene Finley	evergreen.islands@outlook.com	PO Box 223, Anacortes, WA 98221
Marsa Daniel	medaniel@uw.edu	none
Martha Bray	mbray1107@gmail.com	none
Martin Clavijo	clavijovalencia@hotmail.com	13028 Sunset Lane, Anacortes, WA 98221
Mary Ann Dubbel	anndubbel@gmail.com	8304 Shadow Lane, Anacortes, WA 98221
Mary D Lyons	maitelyons@gmail.com	4039 Sharp Road, Anacortes, WA 98221
Matthew Cutter	mwcutter@gmail.com	13672 Rosario Road, Anacortes, WA 98221
Micael Raphael	mmeraphael@gmail.com	3851 Biz Point Road, Anacortes, WA 98221
Michael and Susan Felt	suzanne.felt@comcast.net	13205 Deane Drive, Anacortes, WA 98221
Michael Kruse	Mikenank@gmail.com	13110 Sunset Lane, Anacortes, WA 98221

Michael Lindsay-Jones	lotus7mlj@aol.com	1903 Bradley Dr, Anacortes, WA 98221
Michael Mihalik	m.mihalik@comcast.net	none
Michael Taylor	captmike.mt@gmail.com	13078 Sunset Lane, Anacortes, WA 98221
Michale Sherman	Chiefruffian@hotmail.com	14483 Jura Way, Anacortes, WA 98221
Michele Fremont	jeromemccool@earthlink.net	PO Box 941, Anacortes, WA 98221
Morton Cohen & Kathryn Cavil	morty.cohen@live.com	13834 Seaview Way, Anacortes, WA 98221
Neil Norcross	n_norcross@yahoo.com	11168 Marine Dr, Anacortes, WA 98221
Neil O'Hare	neiloh52@gmail.com	4407 Anaco Beach Place, Anacortes, WA 98221
Ole Raff	frokost@aol.com	3702 Biz Point Road, Anacortes, WA 98221
Patricia and Kurt Hayduck	khpuget@yahoo.com	13980 Biz Point Lane, Anacortes, WA 98221
Patricia Wachs	wachs@peak.org	14026 Seaview Way, Anacortes, WA 98221
Patricia Wasson	pwasson3@comcast.net	14748 Rosario Road, Anacortes, WA 98221
Patricia Winkler	trwinkler@aol.com	13664 Rosario Road, Anacortes, WA 98221
Patrick Lyons	pat.marylyons@comcast.net	4039 Sharp Road, Anacortes, WA 98221
Paul and Janice Flynn	None	4929 Sharpe Road, Anacortes, WA 98221
Paul Flinn	pwflinn@gmail.com	4929 Sharpe Road, Anacortes, WA 98221
Paul Sherman	pshermanpt@gmail.com	4596 Ginnerr Road, Anacortes, WA 98221
Rachel Macmorran	macmorran.arch@gmail.com	3819 West 5th Sreet, Anacortes, WA 98221
Rebecca Claus	Rkclaus@gmail.com	3284 Biz Point Road, Anacortes, WA 98221
Renee Westlund	Renee.westlund@gmail.com	14254 Rosario Road, Anacortes, WA 98221
Richard Bergner	fidalgowildlifehabitat@gmail.com	15515 Yokeko Drive, Anacortes, WA 98221
Richard Solberg	fruitfight@comcast.net	11859 Olgha Road, Anacortes, WA 98221
Richard Van Pelt	rmvp@aol.com	12979 S. Front Street, Clear Lake, WA 98235 (PO Box 101)
Rob Adler	adlerbachrach@gmail.com	4461 Ginnett Road, Anacortes, WA 98221
Robert Mayberger & Marcia Neu	neubergers@comcast.net	13898 Rosario Road, Anacortes, WA 98221
Roberta Hutton	Rahutton5@msn.com	11135 O Ave, Anacortes, WA 98221
Roger Robinson	rogerarobinson@gmail.com	PO Box 924, Anacortes, WA 98221
Rosie Wuebbels	rwuebbels@yahoo.com	11134 O Ave, Anacortes, WA 98221
Roy Eaton	RMEaton@marathonpetroleum.com	13003 S. Wildwood Lane, Anacortes, WA 98221
Ruth Mattson	mapa6854@gmail.com	none
Sarah Lynn Joy	sarahlynnjoy@gmail.com	PO Box 1063, Anacortes, WA 98221
Scott R Bookwalter	scottbookwalter@comcast.net	13760 Donnell Road, Anacortes, WA 98221
Shannon Bailey	shannonlbb@yahoo.com	2609 16th Street Anacortes, WA 98221
Shannon Clark	shannon.clark@dnr.wa.gov	none

Shannon Jordan	smjordan423@comcast.net	3803 Biz Point Road, Anaortes, WA 98221
Sherry Hill	Sherryhill@live.com	13159 Deane Drive, Anacortes, WA 98221
Sidney Wray	wheelieking@gmail.com	4493 Sharpe Road, Anacortes, WA 98221
Siv Kristin Ostland Spain	sivspain@gmail.com	2014 Julia Ave, Bellingham, WA 98225
Stephen Jordan	skjordan0215@gmail.com	3803 Biz Point Road, Anaortes, WA 98221
Stephen Miller	ftdock1@comcast.net	4303 E Ave, Anacortes, WA 98221
Stephen Sauder	sssauder@comcast.net	4049 Edith Point Road, Anacortes, WA 98221
Stephen Taylor	s.l.taylor7117@gmail.com	none
Steve Ranten	Steven.ranten@dnr.wa.gov	none
Susan Queller	slqueller@gmail.com	4305 Whidbey Ct., Anacortes, WA 98221
Suzanna Dentel	suzdentel@gmail.com	4319 Ginnett Road, Anacortes, WA 98221
Sydney Lund	tinnyfry@hotmail.com	14153 Cove Street, Anacortes, WA 98221
Tami Gilden	fidalgot@fidalgo.net	12944 Thompson Road, Anacortes, WA 98221
Ted Reisner	treisner@reisnerdistributor.com	13495 Rosario Road, Anacortes, WA 98221
Thomas Carson	tcarson@wavecable.com	14188 Madrona Drive, Anacortes, WA 98221
Thomas Conroy	tconroy13@gmail.com	4307 Ginnett Road, Anacortes, WA 98221
Thomas Hayko	None	13616 Day Break Lane, Anacortes, WA 98221
Thomas Loesch	tloesch@impressionsworldwide.com	11369 Higgins Airport Way, Burlington, WA 98233
Thomas Moser	tmoser@advocateslg.com	1204 Cleveland Ave, Mount Vernon, WA 98274
Thomas Winkler MD and Patricia W	None	13664 Rosario Road, Anacortes, WA 98221
Todd Carlson	carlsot@wsdot.wa.gov	none
Todd Maxwell	stainedglasstodd@gmail.com	13263 Deane Drive, Anacortes, WA 98221
Tom Glade	tom.glade@comcast.net	none
Tom Paul	tomandyvonnepaul@gmail.com	3698 Biz Point Road, Anacortes, WA 98221
Velma McKelvey	vvmckelvey@gmail.com	1175 Baughman Dr, Claremont, CA 91711
Vicky Raff	notkidn@aol.com	3702 Biz Point Road, Anacortes, WA 98221
Virgil Hofkamp	virgandsuzie@yahoo.com	13028 Sunset Lane, Anacortes, WA 98221
Wanda and L.D. Faller	wandafaller@comcast.net	3922 Bay Lane, Anacortes, WA 98221
William Buchman	buchmanbb@yahoo.com	14763 Taggert Quarry Road, Anacortes, WA 98221
William D Zirbel	navygreyeagle@gmail.com	3135 Biz Point Road, Anacortes, WA 98221
William Daniel	structures206@gmail.com	7571Crescent Lane, Anacortes, WA 98221
William Dietrich	williamadietrich@gmail.com	11660 Marine Drive, Anacortes, WA 98221
William Swain	WASwain@comcast.net	14171 Cove Ct, Anacortes, WA 98221
	mclucastaylor@qwestoffice.net	

EXHIBIT #37

SKAGIT COUNTY GIS MAP OF SUBJECT PARCELS & 300-FOOT BUFFER

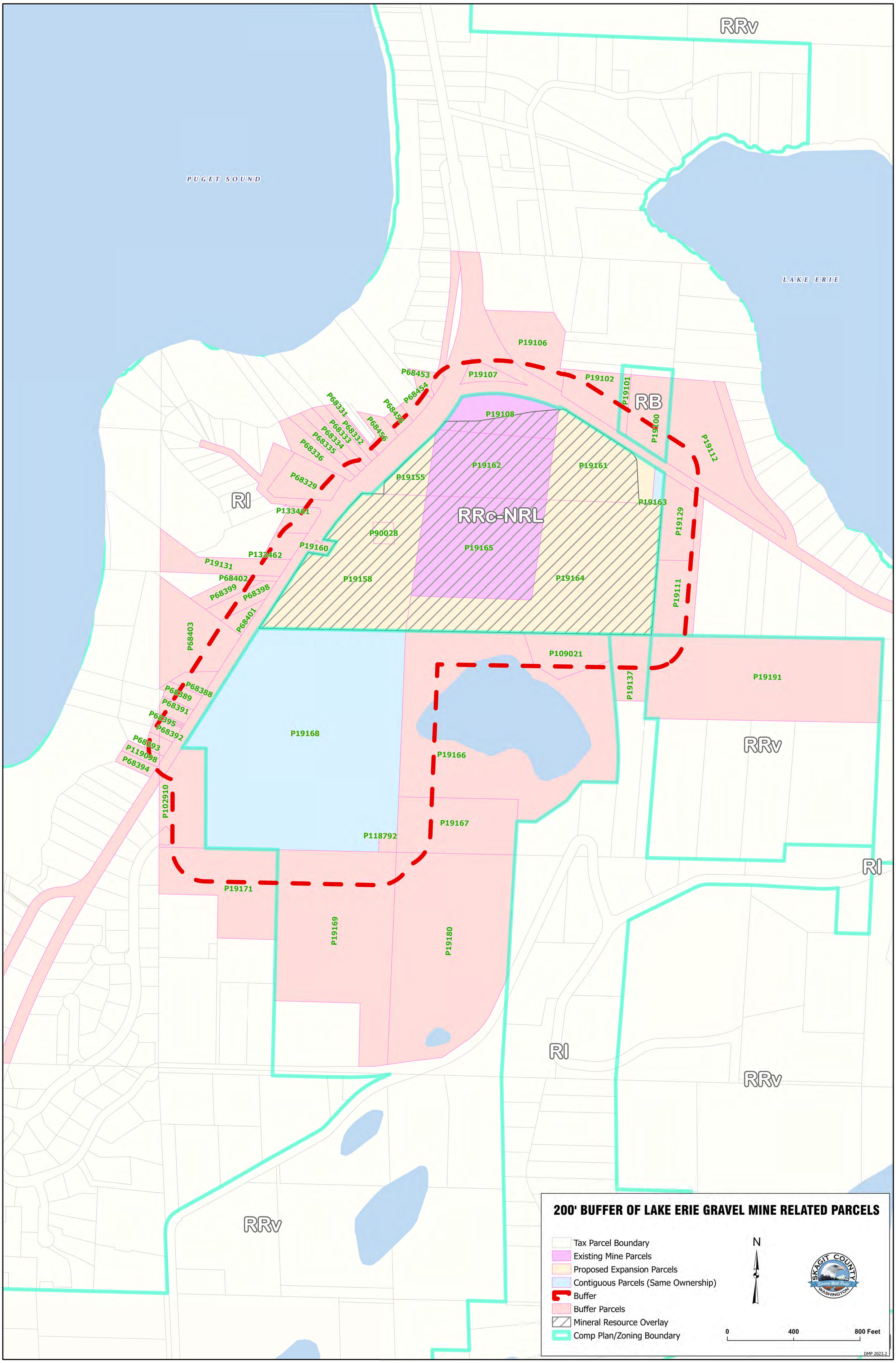

PUGET SOUND
LAKE ERIE
RRv
RB
RI
RRc-NRL
P19106
P19107
P19102
P19101
P19100
P19108
P19112
P19162
P19161
P19155
P19163
P19129
P90028
P19165
P19160
P19158
P19164
P19111
P109021
P19191
P19137
P19168
P19166
P19167
P118792
P19171
P19169
P19180
P102910
P68453
P68454
P68455
P68456
P68331
P68332
P68333
P68334
P68335
P68336
P68329
P133461
P133462
P19131
P68402
P68399
P68398
P68401
P68403
P68388
P68389
P68391
P68395
P68392
P68393
P119098
P68394
200' BUFFER OF LAKE ERIE GRAVEL MINE RELATED PARCELS
Tax Parcel Boundary
Existing Mine Parcels
Proposed Expansion Parcels
Contiguous Parcels (Same Ownership)
Buffer
Buffer Parcels
Mineral Resource Overlay
Comp Plan/Zoning Boundary
N
SKAGIT COUNTY
Strong With Pride
WASHINGTON
0
400
800 Feet
DMP 2023.2

EXHIBIT #38

ADDENDUM TO STAFF REPORT

Planning & Development Services

1800 Continental Place ▪ Mount Vernon, Washington 98273
office 360-416-1320 ▪ pds@co.skagit.wa.us ▪ www.skagitcounty.net/planning

ADDENDUM TO STAFF REPORT (EXHIBIT 38):

DATE: **JUNE 28, 2023**

TO: **HEARING EXAMINER**

FROM: **KEVIN CRICCHIO, AICP, SENIOR PLANNER**

RE: **LAKE ERIE SPECIAL USE PERMIT APPLICATION, EXPANSION OF SAND & GRAVEL MINE, PL16-0556**

SUBJECT PARCELS: EXISTING MINE: P19108, P19162, & P19165; EXPANSION TO MINE: P19158, P90028, P19164, P19155, P19161; CONTIGUOUS PARCELS (SAME OWNERSHIP): P19168, & P19163

LOCATION: **INTERSECTION OF ROSARIO ROAD & MARINE DRIVE, FIDALGO ISLAND; LOCATED IN A PORTION OF SECTION 11, TOWNSHIP 34 NORTH, RANGE 01 EAST, WILLAMETTE MERIDIAN**

Dear Mr. Hearing Examiner:

This addendum to the August 26, 2020 staff report serves as both a chronology and update on the status of the Lake Erie Special Use Permit application, PL16-0556 that the applicant Bill Wooding/Lake Erie Pit LLC submitted to Skagit County's Planning and Development Services Department on December 2, 2016. The Special Use Permit application is to permit the expansion of an existing gravel mine located on the subject parcel(s) from approximately 17.78 acres to approximately 53.5 acres in size.

Following a review of the application, Planning Department staff deemed the application complete on January 5, 2017. A Notice of Development Application (NODA) was published in the Skagit Valley Herald on February 2, 2017, mailed to neighboring landowners located within 300-feet of the subject parcel(s), and posted onsite as is required by Skagit County Code. The public comment period ended on February 17, 2017.

After the public comment period ended, additional information was requested of the applicant. After this material was submitted to Skagit County as was requested, a SEPA Mitigated Determination of Non-Significance (MDNS) was issued on December 3, 2018. The SEPA comment period ended on December 21, 2018 and the appeal period ended on January 4, 2019. The SEPA MDNS was posted onsite, published in the Skagit Valley Herald and

mailed/emailed to parties of record in accordance with Skagit County Code. No appeals were received.

A Notice of Public Hearing was published in the Skagit Valley Herald on August 6, 2020, posted onsite, and emailed/mailed to both neighboring properties within 300-feet of the subject parcel(s) and parties of record. Another Notice of Public Hearing advertising the continuation of the public hearing was published in the Skagit Valley Herald on September 24, 2020. This notice was also posted onsite, and emailed/mailed to both neighboring properties within 300-feet of the subject parcel(s) and parties of record.

The Hearing Examiner conducted an open-record public hearing on August 26, 2020 which was continued to October 14, 2020. The Hearing Examiner approved the subject Special Use Permit (**See Exhibit #24**) subject to conditions on November 30, 2020.

On appeal (**See Exhibit #25**), the Board of County Commissioners remanded (**See Exhibit #26**) the matter (Resolution: R20210038) to the Hearing Examiner to determine if a Geologically Hazardous Site Assessment is needed.

On March 9, 2021, the Hearing Examiner ordered Planning and Development Services (PDS) **(See Exhibit #27)** to direct Wooding to provide such an assessment. The Examiner determined that the appropriate course was to refer the matter to Planning and Development Services (PDS) with instructions to direct the applicant to prepare a Geologically Hazardous Area Site Assessment consistent with Skagit County Code 14.24.200 – 14.24.420. On receipt of such assessment, PDS shall review it and provide an amended staff report to the Hearing Examiner containing the department's analysis and recommendations in light of the report. Thereafter, the Examiner shall schedule and hold a supplementary public hearing in this matter, limited to comment on the Geologically Hazardous Site Assessment. Following this hearing, based on the record made, the Examiner shall issue a decision imposing such additional conditions, if any, as may be necessary to mitigate risks that have been identified.

On March 23, 2021, a letter written by Skagit County Planning and Development Services Department (**See Exhibit 28**) requesting the applicant prepare a Geologically Hazardous Area Site Assessment and Geologically Hazardous Mitigation Area Plan consistent with Skagit County Code 14.24.420 and 14.24.430 respectively.

On May 27, 2021, another letter (**See Exhibit 28**) was written by Skagit County Planning and Development Services Department reiterating additional information was requested of the applicant on March 23, 2021 and that the deadline to provide this information was 4:30 PM on July 21, 2021. Failure to provide this information would result in the Special Use Permit being denied by Skagit County Planning and Development Services Department.

The 120-days provided by Skagit County Code 14.06.105 for submittal of the information expired on July 21, 2021. On July 20, 2021, the day before the expiration date, Wooding's agent sent an email stating that a contract with a consultant had been entered and requesting a further extension of time for submitting the required information.

On July 21, 2021, Skagit County Planning and Development Services Department denied the extension request and denied the applicant's (Wooding's) Special Use Permit application (**See Exhibit #28**) for failure to timely supply requested information.

The applicant appealed (**See Exhibit #29**) this decision by Skagit County. On October 15, 2021, the Hearing Examiner granted the applicant's appeal of the county's decision thereby reversing it (**See Exhibit #30**). According to the Examiner's decision, the application shall remain in good standing through September 2022. During this time the applicant shall have a Geologically Hazardous Site Assessment prepared and shall submit the same prior to the end of September 2022.

On August 12, 2022, the applicant submitted a Geologic Hazard Site Assessment (**See Exhibit #31**) to Skagit County Planning and Development Services Department that was prepared by Wood Environmental and Infrastructure Solutions, Incorporated.

This Geologic Hazard Site Assessment (and subsequent letter from Evergreen Islands) [**See Exhibit 32]** dated November 18, 2022 was forwarded to the county's Third Party Review consultant -the Watershed Company for review.

On January 19, 2023, the Watershed Company provided Skagit County with their Third Party Review findings and response to Evergreen Island's November 18, 2022, letter (**See Exhibit #33**).

On March 3, 2023, Skagit County Planning and Development Services Department received both an email and letter from Evergreen Islands along with a response letter from the Stratum Group (**See Exhibit 34**).

On March 31, 2023, Skagit County Planning and Development Services received a revised Third Party Review and response to Evergreen Island November 18, 2022 letter (**See Exhibit #35**). It was revised per Skagit County's request for formatting and clarity reasons.

Now that the required Geologic Hazard Site Assessment is complete along with the county's Third Party Review, this matter will now go back to the Hearing Examiner. The purpose of the hearing is to review the remanded item(s) required by the Hearing Examiner on March 9, 2021 for Special Use Permit Application PL16-0556 submitted by the applicant.

A new Notice of Public Hearing (**See Exhibit #36**) was published in the Skagit Valley Herald on June 8, 2023, posted onsite, and mailed to neighboring landowners located within 300-feet of the subject parcels as is required by Skagit County Code. Additionally, the notice of record was both mailed and emailed to all parties of record.

Exhibit 37 prepared by Skagit County's Geographic Information Systems (GIS) graphically depicts the subject parcels of the existing mine, proposed expansion thereto, contiguous

parcels under the same ownership of the applicant, and the 300-foot buffer for noticing purposes.

Exhibit #38 is the subject Addendum to Staff Report.

ADDITIONAL STAFF SUGGESTED CONDITIONS OF APPROVAL:

In addition to the suggested conditions of approval that can be found in the Staff Report/Findings of Fact dated August 26, 2020 (**See Exhibit #1**), Skagit County staff suggests below the following conditions of approval after a review of the Geologic Hazard Site Assessment and Third Party Review as follows:

1. Development shall comply with all recommendations and requirements of the Geologic Hazard Site Assessment dated August 11, 2022 prepared by Wood Environment and Infrastructure Solutions, Inc.
2. Development shall comply with all recommendations and requirements of the Third Party Review performed by the Watershed Company.
3. All applicable permits (local, state, and federal) must be secured before any mining/excavation activities begin onsite. Copies of permits shall be provided to the Skagit County Planning & Development Services Department.
4. The applicant shall be responsible for reimbursement to Skagit County Planning & Development Services Department for the full cost of mailing(s) and newspaper publication associated with the Notice of Development Application, Notice of Issuance of SEPA MDNS, Notice of Hearing, and Notice of Decision. Payment shall be made prior to any work beginning onsite and grading permit application submittal &/or issuance.
5. The applicant shall be responsible for reimbursement to Skagit County Planning & Development Services Department for the full cost of Third Party Review of their Geologic Hazard Site Assessment. Payment shall be made prior to any work beginning onsite and grading permit application submittal &/or issuance.

STAFF RECOMMENDATION:

Based on a review of the application material submitted, special use permit criteria, environmental checklist, environmental studies, Third Party review, issued SEPA Mitigated Determination of Non-Significance, and the Findings of Fact, staff recommends to the Hearing Examiner that the subject Special Use Permit application be approved subject to conformance with staff's suggested conditions of approval (as is listed in the Exhibit #1 and above/Exhibit #38).

EXHIBITS:

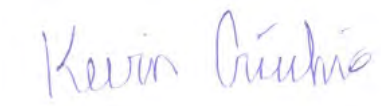
OLD EXHIBITS:	
Exhibit #1	Staff Report/Findings of Fact (Dated: August 26, 2020)
Exhibit #2	Special Use Permit Application and Narrative received December 2, 2016
Exhibit #3	Skagit County Zoning and Assessor's map
Exhibit #4	Site Plans and aerial photographs
Exhibit #5	Notice of Development Application, published February 2, 2017
Exhibit #6	SEPA Environmental Checklist, dated June 8, 2017
Exhibit #7	SEPA Mitigated Determination of Non-Significance (MDNS), dated December 3, 2018, and associated SEPA staff report
Exhibit #8	Critical Areas Reconnaissance by Skagit Wetlands and Critical Areas, dated February 24, 2017
Exhibit #9	Hydrogeologic Site Assessment Report by Maul Foster Alongi, dated September 28, 2016
Exhibit #10	Observation Well Installation letter report by Maul Foster Alongi, dated September 28, 2017
Exhibit #11	Letter from McLucas and Associates, responding to the Del Mar comment letter, dated December 19, 2018
Exhibit #12	Letter from Northwest Groundwater Consultants, responding to the Del Mar Comment letter, dated January 3, 2019
Exhibit #13	Lake Erie Pit Well Reconnaissance by Northwest Groundwater Consultants LLC, dated March 11, 2019
Exhibit #14	Lake Erie Gravel Pit Traffic Impact Analysis by Gibson Traffic Consultants, Inc., dated September 2016
Exhibit #15	Addendum to the Lake Erie Gravel Pit Traffic Impact Analysis by Gibson Traffic Consultants, Inc., dated May 12, 2017
Exhibit #16	Traffic Memorandum by Skagit County Public Works, Dated March 1, 2018.
Exhibit #17	Supplemental (traffic) Memorandum by Skagit County Public Works, dated May 2, 2018
Exhibit #18	Lake Erie Pit air quality best management practices by Maul Foster Alongi, dated September 15, 2016
Exhibit #19	Lake Erie Pit Expansion Noise Study by Acoustics Group, Inc,, dated September 16, 2016
Exhibit #20	List of neighboring property owners and parties of record notified of the Public Hearing.
Exhibit #21	A total of eighteen (18) comment letters were received during the comment periods. Fourteen (14) comment letters were received during the notice of development application (NODA) comment period, an additional three (3) comment letters were received during the Notice of Public Hearing (NoPH), and one (1) comment during the SEPA comment period. Comment letters and emails from the NODA, NoPH & SEPA comment periods are attached as Exhibit 21 and are in chronological order of receipt. Comments letters generally

OLD EXHIBITS:	
	expressed concern about aesthetics, a decrease in water quality of the area, a decrease in slope stability adjacent to Rosario Road, impacts to wetlands found offsite, impacts to fish and wildlife habitat conservation areas, impacts to potential perched/shallow groundwater conditions, increases in traffic, increases in noise and dust generation. Two of comment letters were in support of the proposal. The SEPA comment letter is discussed under Department Findings #6 and the response to the comments is include as Exhibit 9 & 10.
Exhibit #22	The fourteen (14) comment letters received during the NODA comment period were provided to McLucas and Associates, Inc., representing Lake Erie Pit LLC. McLucas and Associates responded to each of the comment letters. The applicants responses are included as Exhibit 22.
Exhibit #23	An additional five (5) comment letters were received outside of the comment periods. All 5 comment letter were from Mr. Andy Dunn, a hydrogeologist with RH2 Engineering. Mr. Dunn represents Bill & Pam Doddridge residing on parcel P19166 to the south of the proposed mine expansion area. The comments are specific to a concern that the gravel mining activities may breach a perched aquifer onsite resulting in subsurface draining Devils Elbow Lake, located on the Doddridge property. The comment letters are included as Exhibit 23. Investigation of their concern included advancing a boring and installation of an observation well near the southern property line, between the lake and the gravel mine. The boring was logged by the hydrogeologist of record and by Mr. Andy Dunn, LHg of RH.2 Engineering. A perched aquifer was not encountered during advancement of the boring to a depth of 277-feet below site grade, an elevation of 168.6 above MSL (see Exhibit 8).

NEW EXHIBITS:	
Exhibit #24	Hearing Examiner's Approval of Special Use Permit, PL16-0556
Exhibit #25	Appellant's Appeal of Hearing Examiner Decision
Exhibit #26	Board of County Commissioners Remand/Resolution to the Hearing Examiner
Exhibit #27	Hearing Examiner Referral to Skagit County Planning & Development Services
Exhibit #28	-March 23, 2021 Letter from PDS to the Applicant Requesting Additional Info; -May 27, 2021 Letter from PDS to Applicant with deadline for Additional Info; -July 21, 2021 Letter from PDS Denying Special Use Permit Application
Exhibit #29	Applicant's Appeal of Planning & Development Services Denial of Special Use Permit
Exhibit #30	Hearing Examiner's Order Granting Appeal & Reversing County's Denial
Exhibit #31	Geologic Hazard Site Assessment (Received August 12, 2022)
Exhibit #32	Evergreen Island's Letter Dated: 11/18/2022 + Stratum Group Review of Geologic Hazard Site Assessment (Dated November 15, 2022)
Exhibit #33	Third Party Review of Geologic Hazard Site Assessment & Response to Evergreen Island's Letter dated 11/18/2022 (Received January 19, 2023)

NEW EXHIBITS:	
Exhibit #34	Evergreen Island Email & Letter Regarding Watershed Company Response to Evergreen Island's Communication of 11/18/2022 + Stratum Group Letter
Exhibit #35	Revised Third Party Review of Geologic Hazard Site Assessment & Response to Evergreen Island's Letter dated 11/18/2022 (Received March 31, 2023)
Exhibit #36	Notice of Public Hearing (Published on 6/8/2023), Neighbor Labels, & Parties of Record
Exhibit #37	Skagit County GIS Map of Subject Parcels & 300-Foot Buffer
Exhibit #38	Addendum to Staff Report

If you have any questions, please let me know. I can be reached by phone at (360) 416-1423 or via email at kcricchio@co.skagit.wa.us. Thank you.



Kevin Cricchio, AICP, ISA,
Senior Planner

EXHIBIT #43

HEARING EXAMINER'S APPROVAL OF SPECIAL USE PERMIT, PL16-0556 ON REMAND, DATED: JULY 13, 2023

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,
For a Special Use Permit	)	AND DECISION ON 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 **APPROVED**. Conditions are necessary to address specific impacts of the proposal.

SUMMARY OF RECORD

Hearing Date:
On June 28, 2023, 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.

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

Kevin Cricchio, County Senior Planner
Todd Wentworth, Wood Environment & Infrastructure Services, Inc.
William Wooding, Applicant Representative
Thomas Mullen, Northwest Groundwater Consultants
Kyle Loring, Attorney for Appellant Evergreen Islands
Dan McShane, Stratum Group
Tom Glade, Evergreen Islands
Marlene Finley, Evergreen Islands
Brian Wetter, Evergreen Islands
Micael Raphael, Evergreen Islands
Konrad Kurp, Evergreen Islands
Jan Heald Robinson, Evergreen Islands
Linda Dobbs, Evergreen Islands
Brinkley Meyers
Franky Parker
Jake Olliffe

Heidi Fish
Deanna Claus
Stewart Toshach
Ellen Bynum, Friends of Skagit County

Exhibits:
The following exhibits admitted into the record during the August 26, 2020, open record public hearing[1] 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
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

[1] The August 26, 2020, hearing continued on October 14, 2020. *Exhibit 24*.

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, 2023[2]
36. Notice of Public Hearing, published June 8, 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

[2] The revised exhibit was received March 31, 2023, but was still dated January 18, 2023.

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

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. *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),[3] 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.

[3] 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.

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

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, and members of the public, including the Appellant, Evergreen Islands (all discussed below), 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. Consistent with the Board of County Commissioners' direction, the Hearing Examiner will not revisit issues other than those related to the Geologically Hazardous Area Site Assessment and the County staff and public responses thereto. All other findings and conclusions set forth in the original decision, dated November 30, 2020, remain undisturbed and are hereby incorporated by reference. *Exhibit 24*.

Notice of Public Hearing on Remand

5. On June 8, 2023, the County published notice of the public hearing on remand. The notice was published in the *Skagit Valley Herald* newspaper, posted on the subject property, mailed to neighboring landowners within 300 feet of the subject parcel, and mailed and emailed to all parties of record. *Exhibit 38, Addendum to Staff Report, pages 1 through 4; Exhibit 36.*

Issues on Remand

6. County staff reviewed the Applicant's Geologically Hazardous Area Site Assessment, and the materials provided by the Applicant and public in response thereto, to determine whether the Geologically Hazardous Area Site Assessment satisfied the direction of the Board of County Commissioners. Staff reviewed the materials submitted, the special use permit criteria, the Hearing Examiner's original decision, and the previous issued SEPA

MDNS. Staff concluded that these materials were adequate to respond to the Board of County Commissioners remand, and that the proposed expansion should be approved, subject to both the conditions in the Hearing Examiner's original decision and five new conditions recommended by staff. *Exhibit 38, Addendum to Staff Report, pages 1 through 4; Exhibit 7; Exhibit 24; Exhibits 31 through 35; Exhibit 39*.

Geologically Hazardous Area Site Assessment

7. The Geologically Hazardous Area Site Assessment (Wood Assessment) was prepared by Wood Environment & Infrastructure Solutions, Inc. (Wood), on August 11, 2022. The Assessment involved a site visit to the existing gravel pit and the proposed expansion area. The Assessment also relied on previously published reviews of site geology and groundwater:
    - Lake Erie Pit Well Reconnaissance (NWGC, 2019)[4];
    - Observation Well Installation (Maul Foster Alongi, 2017)[5]; and
    - Hydrogeologic Site Assessment Report (Maul Foster Alongi, 2016).[6]

    Wood also reviewed County LIDAR imagery for evidence of erosion along the coastal bluffs northwest of the site—the steep areas identified by the Board of County Commissioners as the reason for the remand. Wood determined that:

    > The head scarp of the nearest coastal bluff is approximately 300 feet northwest of the northwest sidewall of the existing Pit 1 and is approximately 800 feet northwest of the proposed expansion. Rosario Road runs between the site and the coastal bluffs, and the cut slope between Rosario Road and the site is clearly visible. The cut slope graded for Rosario Road is not considered a geologic hazard as it is not a natural slope but is an engineered and maintained slope.

    Relying on the three previous studies cited above, Wood determined that groundwater flow from the mine site flows north and northeast, toward Lake Erie, not west or northwest toward the coastal bluffs. In a section of the Assessment devoted specifically to the coastal bluffs, Wood stated that the proposed expansion would not have any impact on the bluffs. The bluffs are too far away (300 to 800 feet), and groundwater from the site does not flow in that direction. Nor would the mine affect the elevation of the groundwater table, because excavation at the mine will not extend down into the groundwater table. Stormwater from the mine will be managed and infiltrated on site and would not affect slope stability. *Exhibit 31*.

Evergreen Islands Response to Geologically Hazardous Area Site Assessment

[4] In the record as Exhibit 12.
[5] In the record as Exhibit 10.
[6] In the record as Exhibit 9.

8. The first response to the Wood Assessment came from Evergreen Islands, the Appellant to the Hearing Examiner's original decision. Evergreen Islands submitted a comment dated November 18, 2022, with an attached review by geologist Dan McShane, of Stratum Group, dated November 15, 2022. In his November 2022 review, Mr. McShane called the County's attention to a March 23, 2021, communications between County staff and the Applicant (Exhibit 28), which occurred following the remand from the Board of County Commissioners but before the Applicant had submitted any responsive materials. In the March 23, 2021, communication, County staff requested that the Applicant supply certain specific analyses in respond the remand:

- Analyze the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion and attendant removal of soil and vegetation which could alter groundwater behavior in the vicinity of the mine.
- Analyze the presence of springs on the coastal bluff to the northwest of the mine that are at an elevation down gradient of the inferred groundwater level.
- Respond to the testimony of the professional geologist who identified that the proposed mine expansion will create an increased landslide risk.

Mr. McShane argued that the Wood Assessment had not supplied analysis of these specific issues. Instead, the Wood Assessment had simply relied on the three earlier reports, which, according to Mr. McShane, did not analyze the groundwater flow direction toward the coastal bluffs, did not discuss the presence of springs in the coastal bluffs, and did not respond to Mr. McShane's earlier comments. *Exhibit 28; Exhibit 32*.

Third-Party Review

9. The next response came from the County's third-party reviewer, The Watershed Company, which reviewed both the Wood Assessment and Mr. McShane's November 2022 response. In its Third-Party Review, the Watershed Company reviewed the three groundwater analyses that the Wood Assessment had relied upon, and which Mr. McShane had called inadequate. The Watershed Company found no discrepancies or inaccuracies in the data collection or analysis, nor anything else that would call into question the determination that groundwater flows in a northeasterly direction (in other words, away from the coastal bluffs). According to The Watershed Company:

> The lithology is reasonably consistent with the well logs, the groundwater levels were developed from a comprehensive mass well measurement, and the flow paths were plotted perpendicular to the groundwater surface contours. The aquifer is well characterized at recorded depths and static water levels. The prevailing groundwater flow path is to the north and northeast of the proposed project.

The Watershed Company discussed the mine's potential to threaten bluffs to the west and southwest of the proposed mine expansion and found that the bluffs were 800 to 1,000 feet from the proposed expansion area. It concluded that groundwater seepage coming from the bluffs is likely from a regional aquifer. The Watershed Company found no reason to conclude that the proposed mine would change the rate or volume of groundwater seeping from the bluffs.

In its January 18, 2023, report the Watershed Company also provided its own additional report, dated November 25, 2022, regarding the project, in which it had reviewed a test well dug in 2017 for the project and had determined that, consistent with other reports, groundwater flow was likely to the north/northeast. *Exhibit 33*.[7]

Evergreen Islands Response to Third-Party Review

10. On March 3, 2023, Evergreen Island provided a response to the Third-Party Review, with an attached report by its geologist, Mr. McShane, dated March 2, 2023. In his March 2023 review, Mr. McShane argued that The Watershed Company had focused on bluffs to the west and southwest of the proposed mine site, not bluffs to the west and northwest of the site. Mr. McShane argued that the springs in the coastal bluffs to the northwest of the site had never been identified or discussed by anyone other than himself, and this omission was not consistent with the County's guidance of March 23, 2021 (Exhibit 28). He also argued that there has never been any direct measurement of groundwater elevations between the mine site and the northwest bluffs—all previous assessments were based on measurements nearby, but not directly along that flow path. Mr. McShane argued that these previous assessments were flawed even on their own terms, in that water levels measured directly by Northwest Groundwater Consultants (NWGC) (one of the three studies relied on by the Wood Assessment) were 50 feet and 35 feet lower than those identified on the groundwater contour map produced by Maul Foster (the other two of the three studies relied on by the Wood Assessment). Mr. McShane argued that springs in the coastal bluffs to the northwest of the site were a major driver of the slopes' instability, and that groundwater flow to the bluffs, if it does indeed occur, could contribute to these springs. According to Mr. McShane, "The role of groundwater flow to the bluff remains unevaluated." *Exhibit 34*.

Public Comments

11. The County received public comments from dozens of individuals. In summary, the overwhelming majority of these comments called for additional studies of slope stability. Commenters argued that the materials submitted on remand did not constitute a new study but merely a rehash of old material. Commenters argued that the proposed mine expansion would further destabilize bluffs in the area (not just the bluffs to the northwest,

[7] A revised version of the Third-Party Review (Exhibit 33) appears in Exhibit 35, but that exhibit merely changes the format of the Exhibit 33 version. It does not change the text. *Exhibit 38, Addendum to Staff Report, page 3; Exhibit 35*.

but also to the west and southwest) and that houses atop the bluffs could be jeopardized as a result. Several of the comments identified the presence of springs in the coastal bluffs. Some of the comments also raised issued unrelated to slope stability, such as noise, traffic, and air quality, each of which, commenters argued, would be worsened by the proposed mine expansion. *Exhibit 39*.

12. One of the comments included an attached geological assessment, the "Geary Preserve Bluff Geological Assessment," prepared in support of Skagit County project no. 21-051, and dated August 12, 2021. The Geary Preserve Assessment analyzed coastal bluffs to the west/northwest of the mine site—the same that are the basis for the remand—albeit the Geary Preserve Assessment was for a project unrelated to the proposed mine expansion. The Geary Preserve Assessment observed "intermittent seepage within the lower exposed bluff as well as widespread colluvium at the base of the bluff." The Geary Preserve Assessment found that:

> Drainage patterns near the bluff crest were altered by development of the road and parcels, along with roadside ditch installation. As the headscarps for these large landslides are some distance from the beach and separated by narrow channels, landslides of this type are likely not triggered by marine erosion and rather by groundwater, surficial wetness, and the stratigraphy of the bluff, although long-term wave attack does result in the bluffs being in an "oversteepened" condition in much of the bluff shore. Bluff toe erosion from wave attack was not commonly observed during our field visit.

However, the Geary Preserve Assessment did not analyze groundwater flow direction in the vicinity of the coastal bluffs or the mine site. It did not mention the mine as a contributor to the altered drainage patterns that affect the stability of the bluffs. Instead, as quoted above, it cited the development of the roads and parcels, which lie closer to the bluffs than the mine site does. The Geary Preserve Assessment specifically cited the actions of some homeowners as contributing the erosion of the coastal bluffs, including "performing maximum view enhancement actions by topping or excessively limbing trees, likely contributing to increased slope instability."

The Geary Preserve Assessment recommended restrictions on coastal homeowners' activities, including avoiding topping trees and less-aggressive limbing of trees. It recommended that homeowners use swales to deal with stormwater whenever possible, rather than tightlines down the bluffs, and that any tightlines that are necessary be made of high-density polyethylene instead of cheaper, more failure-prone plastics. In some cases, the Geary Preserve Assessment stated that houses that are too close to the bluffs may need to be relocated landward: "House relocation is becoming more common in the greater Puget Sound area … and offers owners more security and the ability to work on

other long-term issues." The Geary Preserve Assessment did not analyze the existing mine or the proposed mine expansion, nor did it include any recommendations for or against mine expansion. *Exhibit 39*.

Testimony

13. 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 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. There will be no rock screening, rock crushing, or blasting. A 100-foot buffer will be maintained around the site.

Mr. Cricchio set forth the procedural history of the original decision, the appeal, the remand, the denial of the application, and the reversal of the denial, leading to today's hearing on remand. He described the Geologically Hazardous Area Site Assessment and the third-party and Appellant reviews thereof. Based on the Geologically Hazardous Area Site Assessment, Mr. Cricchio recommended approval of the mine expansion with five new conditions, as well as leaving undisturbed the conditions of approval in the Hearing Examiner's original decision. The five new conditions include reimbursement of the County for the expense of Third-Party Review, plus compliance with the recommendations in the Geologically Hazardous Area Site Assessment and Third-Party Review reports. Mr. Cricchio acknowledged that he is not a geologist, but the geologists' reviews and recommendations struck him as adequate and reasonable to allow the project to move forward. *Testimony of Kevin Cricchio*.

14. Todd Wentworth is the consulting geotechnical engineer to the Applicant and the author of the Geologically Hazardous Area Site Assessment. He testified that he relied on the hydrogeology reports cited in his report to determine that groundwater would not flow in the direction of the coastal bluffs to the northwest of the mine site. He concluded that standard mine buffers and the normal mine reclamation process would be adequate to protect slopes in the vicinity. He did not see any reason to require the Applicant to take any mitigation measures other than those that would apply to any mine anywhere.

Mr. Wentworth acknowledged, in response to the testimony of Dan McShane (summarized below), that groundwater does seep out of the coastal bluffs to the northwest of the mine site. He deferred to hydrologist Thomas Mullen (whose testimony is also summarized below) as to whether the mine would change the flow direction of groundwater. But, if the mine did not change the flow direction of groundwater, then Mr.

Wentworth was comfortable in his assessment that the mine would not increase the danger of slope instability. *Testimony of Todd Wentworth*.

15. William Wooding is the Applicant Representative and owner of the mine. He testified that the mine pit has actually been there since the 1930s. He had been the owner and operator since the 1960s. He recognized that his mine required a special use permit because it had exceeded certain limits in the code. He testified that the actual volume of material leaving the mine would, in all likelihood, be far lower than the numbers Mr. Cricchio had cited as a possible maximum. He affirmed that, in his opinion and experience, water from the mine had always drained to the north or east, not the west. *Testimony of William Wooding*.

16. Thomas Mullen, geologist, is a project consultant for the Applicant. He is affiliated with Northwest Groundwater Consultants (NWGC). He prepared some of the underlying hydrology reports upon which Mr. Wentworth based the Geologically Hazardous Area Site Assessment. Mr. Mullen testified that he did a well reconnaissance in March 2019 in which he measured groundwater levels in three wells in and around the mine pit. Based on these measurements, he concluded that groundwater was flowing off the site in a north/northeasterly direction.

    Mr. Mullen acknowledged the existence of springs in the coastal bluffs to the northwest of the mine site, as identified in the review of Mr. McShane. He testified that he did not believe groundwater flow from the mine site would have a detrimental effect on those springs. He acknowledged that he had not reviewed the Geologically Hazardous Area Site Assessment.

    In response to Mr. McShane's testimony (summarized below) and Mr. Wentworth's testimony (summarized above), Mr. Mullen testified that there are no groundwater monitoring wells to the northwest of the mine site. He testified that excavation of the mine will not go down to the groundwater table but rather will be 50 to 100 feet above groundwater. He believed that stormwater conveyances would mitigate any infiltration of stormwater into the groundwater table and thus, nothing about the mine's operation would affect the groundwater table in the vicinity of the coastal bluffs. *Testimony of Thomas Mullen*.

17. Kyle Loring, attorney for Appellant Evergreen Islands, argued that the Board of County Commissioners had remanded the Hearing Examiner's original decision to consider issued raised by geologist Dan McShane regarding groundwater flow, and that the materials now before the Examiner did not consider those issues. Mr. Loring argued that, although some groundwater may flow north or northeast, as described by Mr. Mullen, it did not preclude that other groundwater may flow northwest—a possibility, he argued, that has never been studied by any of the reviewers. He said the Geologically Hazardous

Area Site Assessment simply assumed away the issue by relying on earlier groundwater studies that were already in the record prior to the remand. No new, physical investigations have been conducted. The third-party reviewer also did not conduct its own physical investigations and even appeared to misunderstand which coastal bluffs concerned the County Commissioners—the northwestern bluffs, not the southwestern bluffs or Dodsen Canyon. *Testimony of Kyle Loring*.

18. Dan McShane, geologist from the Stratum Group hired by Evergreen Islands, testified about his review of the Geologically Hazardous Area Site Assessment prepared by Wood and the Third-Party Review prepared by The Watershed Company. Mr. McShane testified that he had done some earlier work on the coastal bluffs to the northwest of the mine site, which is how he knew about the springs in the bluff in the first place. He described the springs as evidence of a "blowout failure," a form of slope instability, a photograph of which is in his report of March 2, 2023 (attachment to Exhibit 34). Mr. McShane testified that the LIDAR imagery (also in Exhibit 34) shows that slope failures intrude quite far landward of the coast, such that groundwater from the mine site could, potentially, interact with the slope failures. He acknowledged that groundwater from the mine flows east, but he said that flow direction was due to the presence of a layer of glacial till. If glacial till were to be removed in the course of mining, the groundwater flow direction could change. Potentially, it could flow to the northwest and interact with the slope failures, by contributing additional groundwater to the groundwater that already seeps out from the coastal bluffs to the northwest. This possibility, of changed groundwater flow, is the main issue he believed required additional study. Mr. McShane acknowledged that he, himself, had not studied whether groundwater would flow to the northwest if mining were expanded. He testified that the elevation of the springs of 165 to 175 feet implied that groundwater, or at least a portion of groundwater, was "probably" flowing northwest, because the springs are downgradient of groundwater at the mine site. He thought that the proposed mine could "very well" affect the groundwater table at the coastal bluffs, because the groundwater table at the proposed mine site is higher than the springs and because the mine could remove some of the overlying glacial till which current directs groundwater to the northeast. *Testimony of Dan McShane*.

19. Tom Glade, the vice president of Evergreen Islands, testified that slope erosion reaches all the way to Rosario Road. There have been landslides in the area in the past, and the bluffs are eroding during storms. He testified that the mine expansion would jeopardize Rosario Road. *Testimony of Tom Glade*.

20. Marlene Finley is on the board of directors of Evergreen Islands. She testified that the application is not ripe for decision because the application is incomplete. She said the materials still do not address risks from landslide, so the materials are not responsive to the County staff and County Commissioners' concerns. *Testimony of Marlene Finley*.

21. Brian Wetter is a member of Evergreen Islands. He described the history of the organization as a 501(C)(3) organization in existence in and around Fidalgo Island since 1978. He spoke highly of Applicant Mr. Wooding's community activities over many years. Mr. Wetter said the Applicant's geotechnical consultants had served him poorly because they were still failing to analyze the risks that the County Commissioners raised. No new work had been done, and no new on-site data has been collected. *Testimony of Brian Wetter*.

22. Micael Raphael is a member of Evergreen Islands. She lives approximately 1,200 feet from the proposed mine expansion. She argued that a Department of Ecology map shows that 50 percent of all water will run west of the mine toward the coastline. She said that previous studies in the area had revealed issues related to slope instability. She said the mine expansion would jeopardize lateral slope support on properties adjacent to the mine, in violation of SCC 14.26.465. *Testimony of Micael Raphael*.

23. Konrad Kurp is a member of Evergreen Islands and a civil engineer. He testified favorably about the Applicant as a person, but he said the proposed mine expansion still needed review because the geologists had not done the work required. Seepage on the northwest cliffs implies there is an underlying clay layer that pushes the water out of the cliff face. The mine is above that clay layer. The increase in groundwater infiltration at the expanded mine site is significant, because the clay layer will have been removed by mining. The clay layer currently forces runoff to the northeast, but once it is gone, groundwater may run in a different direction. Mr. Kurp recommended that the mine not be expanded. *Testimony of Konrad Kurp*.

24. Jan Heald Robinson is on the board of Evergreen Islands and a neighbor of the existing mine pit. She said that members of the community who oppose the mine are not newcomers. Her own family has been there since in the 1890s. She testified that 16 homes on the bluff above Burrows Bay will be placed at risk by the expansion of the mine. An additional 75 homes risk losing their water systems. Rosario Road was also placed at risk. She said that new studies were required prior to approval of the proposed mine expansion, as requested by the County. *Testimony of Jan Heald Robinson*.

25. Linda Dobbs is a member of Evergreen Islands and a member of the Sunset Lane Homeowners Association (HOA). The HOA is very close to the entrance to the pit, north and west of the mine site along the bluff. She said one of the member homeowners had suffered one of the cliff blowouts. Ms. Dobbs said the Commissioners had one requirement: an analysis of groundwater to the northwest. She said no such analysis had been done. *Testimony of Linda Dobbs*.

26. Brinkley Meyers testified that she and her husband live in one of the houses on Rosario Road that are at risk. She was the commenter who had submitted into the record the

"Geary Preserve Bluff Geological Assessment" in Exhibit 39. She said the Geary Preserve Assessment directly contradicted the Applicant's materials with regards to groundwater flow and rainwater flow. Ms. Meyers testified that the slope below her property is eroding. She said the Skagit County Shoreline Master Program recommending halting any works in the area because of its instability. She said the County had told her she couldn't build so much as a stairway down the bluff, so she did not understand why the nearby mine could be expanded. *Testimony of Brinkley Meyers*.

27. Franky Parker is the president of the Sunset Lane Homeowners Association. He testified that every member of the HOA is opposed to the mine expansion. He said blowouts in the bluff are already happening. He said the absence of groundwater monitoring wells to the north and northwest of the mine was unacceptable. He said that County property was available for wells to be drilled. He said the Geary Preserve Assessment shows depressional erosion to the northwest of the mine site. Mr. Parker said that there could be another clay layer that nobody knows about. In addition, he said that mine reclamation would not occur for 60 years, so water seepage needed to be analyzed now. He said the new analysis was based on old data, which did not look at the west side of Rosario Road but only at the east of the Rosario Road. *Testimony of Franky Parker*.

28. Jake Olliffe testified that the mine expansion will collect more water. The additional water will lead to more danger for nearby homes. The springs in the bluffs are already substantial—so much so that his dog can drink from them. *Testimony of Jake Olliffe*.

29. Heidi Fish testified that the County's first priority should be the keep the community safe and healthy and harmonious. She said there needed to be new hydrological studies to assess the direction of groundwater flow. She said the slopes are not stable, and her own backyard is eroding. She also said the gravel pit wall was not stable. She urged the Hearing Examiner to deny the application outright. *Testimony of Heidi Fish*.

30. Deanna Claus testified favorably about the Applicant's character. She said the expansion of the pit was a scary idea because of the slope instability. She said the mine was already quite large and would only be more daunting if the mine were enlarged. She also wondered whether the expanded pit would affect nearby homes' water wells. *Testimony of Deanna Claus*.

31. Stewart Toshach is an environmental scientist who lives adjacent to Dodsen Canyon. He said the mine would affect his property. He argued that the purpose of the permit should be to mitigate environmental harms from past mining, not to allow new mining. Mr. Toshach said that the proposal would outlive the Applicant. He argued that the data in the record was insufficient to evaluate groundwater impacts to Dodsen Canyon. Groundwater impacts to Dodsen Canyon and other bluffs could jeopardize homes. Mr. Toshach said that building permits for other projects in the area force homeowners to

build 300 feet back from the slope and face other permitting hurdles due to the slopes' instability. Yet this mine, a far larger project, was being allowed to proceed. He said geotechnical drilling in many locations around the site was the only way to learn which direction the groundwater flows. *Testimony of Stewart Toshach*.

32. Ellen Bynum is the executive director for Friends of Skagit County. She said the mission of Friends of Skagit County is to appeal bad land use decisions. She said the County had failed to obtain sufficient information to evaluate the proposed expansion. There was insufficient information about groundwater flow, groundwater levels, hydrological mapping, identification of aquifers, and springs and seepage from the bluffs. Ms. Bynum suggested that the Applicant be required to submit a mining plan and furnish the missing information. She said the County should bring in consultants to reduce the risk if the County was not able to evaluate the risk itself. *Testimony of Ellen Bynum*.

Staff Recommendation

33. Mr. Cricchio testified that the County staff recommends that the Hearing Examiner approve the SUP request, with five new conditions. *Testimony of Kevin Cricchio; Exhibit 38, Addendum to Staff Report, page 4*.

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 R20210038, dated February 23, 2021. *Exhibit 26*.

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:

- 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.

Exhibit 26.

Conclusions Based on Findings

1. **The steep area to the west/northwest of the Mine requires the preparation of a Geologically Hazardous Area Site Assessment, and one was submitted by the Applicant.** The Hearing Examiner previously determined that a Geologically Hazardous Area Site Assessment was required in his order dated March 9, 2021. A Geologically Hazardous Area Site Assessment is warranted in light of the many homes that lie atop the coastal bluffs to the west and northwest of the proposed mine expansion, the known history of erosion and landslides atop those bluffs, and the disagreement among professional geologists about the safety of the proposed mine expansion with regards to its potential impacts to groundwater flow. *Findings 3; 6 – 33*.

2. **The Geologically Hazardous Area Site Assessment is consistent with SCC 14.24.400–.420 and the Hearing Examiner's discretion**. The Hearing Examiner exercises his discretion to conclude that the geologically hazardous area site assessment is compliant with the Board of County Commissioner's order on remand. The Geologically Hazardous Area Site Assessment prepared by Wood does not, strictly speaking, comply with SCC 14.24.420. That section requires specific elements to appear in an assessment, including:

    (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.

SCC 14.24.420(2).

Here, the Wood Assessment does not include an estimate of the coastal bluff retreat rate (criterion (e)), nor an estimate of the coastal bluff's slope stability over the life of structures placed atop the bluff (criterion (f)). The Hearing Examiner concludes, however, that such elements are not necessary in this case. The proposed mine expansion is not being built within 200 feet of a known or suspected risk, as contemplated in SCC 14.24.420(1), nor within "a distance from the base of a landslide hazard area equal to the vertical relief," as also contemplated in SCC 14.24.420(1). The existing mine is approximately 300 feet from the bluffs; the proposed expansion is approximately 800 feet. Thus, under SCC 14.24.420(1), a geologically hazardous site assessment would not normally be triggered in the first place. Instead, a geologically hazardous site assessment has been ordered out of an abundance of caution in light of the possibility of groundwater flow from the proposed mine expansion to the bluffs northwest of the site. Given that the trigger for the assessment falls outside the strict requirements of the code, the Hearing Examiner will exercise the discretion afforded him by Resolution R20210038 not to require strict adherence to the elements of an assessment. The Applicant's Geologically Hazardous Area Site Assessment, as will be discussed below, is adequate to the task required on remand: to assess the possibility that groundwater flow altered by the proposed mine expansion could affect the coastal bluffs northwest of the site. *Findings 1 – 33*.

3. **The preponderance of the evidence supports the conclusions of the Geologically Hazardous Areas Site Assessment**. The Geologically Hazardous Areas Site Assessment prepared by Wood concluded that the proposed mine expansion would not jeopardize the stability of the coastal bluffs to the northwest of the proposed mine expansion. Author Todd Wentworth was aware of the seeps or springs that emerge from

the coastal bluffs northwest of the mine site. He concluded these seeps or springs are from groundwater. He concluded, however, that groundwater from the proposed mine expansion will not affect the groundwater seeping from the coastal bluffs. That being the case, Mr. Wentworth concluded, in a section of his Assessment specifically devoted to the coastal bluffs, that the mine expansion would not affect the bluffs.

Mr. Wentworth's conclusion that groundwater from the mine expansion will not affect the northwestern coastal bluffs was predicated on his conclusion that groundwater beneath the mine flows north and northeast, not northwest. That conclusion, in turn, was based on the work of hydrologist Thomas Mullen. Mr. Mullen is the only person who has performed a physical investigation of groundwater flow at the mine site. He drilled three test wells in and around the mine pit. Based on those three test wells, as well as the topography of the site, he concluded that groundwater flows north and northeast.

The County's third-party reviewer, The Watershed Company, agreed with the methodology employed in the Wood Assessment by Mr. Wentworth, which in turn relied on the data generated by Mr. Mullen. Thus, the Hearing Examiner concludes that the Applicant made a *prima facie* showing that groundwater flows from the mine site will not increase the jeopardy of the northwestern bluffs—which, as the public testimony and the Geary Preserve Assessment showed, are already unstable and prone to landslides and erosion due to both natural conditions and the actions of homeowners developing their properties atop the bluffs, as well as drainage impacts from Rosario Road.

It is not the case that the Applicant's reviewers and the County's third-party reviewer overlooked the northwestern bluffs. On the contrary, in the testimonies of Mr. Wentworth and Mr. Mullen, and in the written reports of Mr. Wentworth and The Watershed Company, the northwestern bluffs are specifically discussed. It is true, as Mr. Loring noted, that one paragraph in The Watershed Company's January 18, 2023, Third-Party Review is devoted to bluffs to the southwest of the proposed mine. However, that same review also references Evergreen Island's concerns about bluffs to the northwest of the proposed mine, so it is not the case that The Watershed Company was confused about which bluffs were supposed to be the subject of the Geologically Hazardous Areas Site Assessment.

Dan McShane argued, in his written reviews and in his oral testimony, that it is possible that groundwater will flow to the northwest if the proposed mine expansion is excavated. His argument is predicated on the belief that the reason groundwater currently flows to the north/northeast is because of a layer of glacial till. If that layer is removed during mining, then it is possible groundwater will no longer flow north or northeast. It may flow somewhere else, including northwest. If it does flow northwest, it may contribute to groundwater seeping out from the coastal bluffs, which would, in turn, contribute to their

instability. Mr. McShane argues that this chain of possibilities demands further investigation, including test wells dug off-site of the mine to the northwest.

The Hearing Examiner is not persuaded by Mr. McShane's attack on the work of Mr. Wentworth, Mr. Mullen, and The Watershed Company. Mr. McShane has not demonstrated that groundwater will flow to the northwest if the proposed mine expansion is excavated. He supplied no groundwater flow analysis or modeling of his own to show a northwestern flow under various configurations of the mine. His concern about northwestern flow is speculative. That speculation has now been considered in the Wood Assessment and The Watershed Company's review, and those authors did not see any reason to believe northwestern flow would occur.

It is true that the Applicant and third-party reviewers themselves have not conducted groundwater flow analysis or modeling under various configurations of the mine. Part of Mr. McShane's attack on their work is that they should have performed such analysis, including the digging of test wells to the northwest, on the properties not owned or controlled by the Applicant. The Hearing Examiner agrees that such investigations would have led to a stronger, more persuasive Geologically Hazardous Areas Site Assessment, but, in the absence of evidence showing a substantial likelihood that northwestern flow will occur, it is not reasonable to require the Applicant or the County to conduct offsite, physical investigations to rebut speculation that it might occur. A speculative attack on the Geologically Hazardous Areas Site Assessment is not enough to outweigh the authors' and reviewers' conclusions, which were based on on-site wells as well as topographical review.

The order on remand required further assessment of the dangers to the northwestern bluffs. That assessment has now occurred. Not every assessment requires new test wells or modeling. Many assessments (including Mr. McShane's own reviews) are based on a simple site visit and a review of the existing data. Although more testing and more data would always be welcome, the Hearing Examiner cannot conclude that they would be required here. The existing evidence shows groundwater flow from the mine site that does not jeopardize the northwestern cliffs, and none of the evidence put forward in rebuttal shows otherwise. The Hearing Examine concludes that the Geologically Hazardous Areas Site Assessment, and the evidence in the record, is sufficient to satisfy the order on remand. *Findings 1 – 33,*

4. **Additional conditions are necessary to mitigate risks identified during the supplemental proceedings**. County staff recommended the Hearing Examiner retain the conditions of approval set forth in the original decision and add five new conditions relating to the geotechnical work that has been performed on remand. County staff recommend that recommendations set forth in the Geologically Hazardous Areas Site Assessment, and The Watershed Company's Third-Party Review, be added to the

conditions of approval for the proposed mine expansion. In addition, County staff recommends that the Applicant reimburse the County for the costs the County has incurred in obtaining the Third-Party Review and providing public notice of the remand hearing. The Hearing Examiner agrees that these are reasonable conditions. *Findings 6 and 33*.

DECISION

Based on the preceding findings and conclusions, the Hearing Examiner orders that the original decision, dated November 30, 2020, be **MODIFIED** to include the following new conditions, to supplement the conditions set forth in the original decision:

1. Development shall comply with all recommendations and requirements of the Geologically Hazardous Areas Site Assessment dated August 11, 2022, prepared by Wood Environment and Infrastructure Solutions, Inc.

2. Development shall comply with all recommendations and requirements of the Third-Party Review performed by the Watershed Company, dated January 18, 2023, including the attachment thereto, dated November 22, 2022.

3. All applicable permits (local, state, and federal) must be secured before any mining excavation activities begin onsite. Copies of permits shall be provided to the Skagit County Planning & Development Services Department.

4. The Applicant shall be responsible for reimbursement to Skagit County Planning & Development Services Department for the full cost of mailings and newspaper publication associated with the Notice of Development Application, Notice of Issuance of SEPA MDNS, Notice of Hearing, and Notice of Decision. Payment shall be made prior to any work beginning onsite and grading permit application submittal and/or issuance.

5. The Applicant shall be responsible for reimbursement to Skagit County Planning & Development Services Department for the full cost of Third-Party Review of the Geologically Hazardous Areas Site Assessment. Payment shall be made prior to any work beginning onsite and grading permit application submittal and/or issuance.

DECIDED this 13th day of July 2023.

ALEX SIDLES
Hearing Examiner

EXHIBIT #44

NOTICE OF DECISION

SKAGIT COUNTY PLANNING AND DEVELOPMENT SERVICES
NOTICE OF DECISION
For
SKAGIT COUNTY CASE #PL16-0556

Notice is hereby given that on July 13, 2023, the Skagit County Hearing Examiner issued a decision of approval regarding the remanded items associated with the Special Use permit application #PL16-0556 by Lake Erie Pit LLC for the expansion of an existing gravel mine from 17.78 acres to approximately 53.5 acres, allowing for the removal of approximately 60,000 tons of gravel per year for 60 years. Furthermore, the Hearing Examiner ordered that the original Hearing Examiner's approval of the subject Special Use Permit dated November 30, 2020, be modified to include 5 new conditions of approval.

Location: The subject property is located in south of the intersection of Rosario Road and Marine Drive, within a portion of Northwest Quarter of Section 11, Township 34 North, Range l, Willamette Meridian, within unincorporated Skagit County, Washington.

Existing Mine: P19108, P19162, & P19165; Expansion to Mine: P19158, P90028, P19164, P19155, P19161; Contiguous Parcels (Same Ownership): P19168, & P19163

Proponent: Lake Erie Pit LLC, c/o Bill Wooding, 13540 Rosario Road, Anacortes, WA 98221.

Pursuant to Skagit County Code 14.06.200, the Notice of Decision shall be forwarded to parties of record, the applicant and other applicable parties of interest.

The applicant and/or a party of record may appeal the decision of the Hearing Examiner to the Skagit County Board of Commissioners pursuant to the provisions of Section 14.06.110. Parties with standing to appeal must submit the appeal form and appeal fees to the Planning and Development Services Department within 14 calendar days of the date of the Decision.

Transmitted to the Skagit Valley Herald:	July 18, 2023
Please publish:	July 20, 2023
Appeals must be submitted by:	July 27, 2023

Kevin Cricchio, AICP, ISA, Senior Planner
Skagit County Planning and Development Services
1800 Continental Place
Mount Vernon, Washington 98273
(360) 416-1423

EXHIBIT #45

2 APPEALS RECEIVED: EVERGREEN ISLAND, PL23-0363 & SUNSET LANE ASSOCIATION, PL23-0380

Appeal or Request for Reconsideration

Planning & Development Services · 1800 Continental Place · Mount Vernon WA 98273
voice 360-416-1320 · inspections 360-416-1330 · www.skagitcounty.net/planning

File #: PL23-0363
RECEIVED
JUL 27 2023
SKAGIT COUNTY PDS
Received by:

Appeal ☐

What are you appealing?

- ☐ Appeal of an Administrative Interpretation/Decision/Action to the Hearing Examiner
- ☐ Appeal of an Administrative Order to Abate (code enforcement order) to the Hearing Examiner
- ☐ Appeal of Impact Fees to the Hearing Examiner (impact fees must be paid) (SCC 14.30.070)
- ☑ Appeal of Hearing Examiner Decision/Action to the Board of County Commissioners
- ☐ Request for Reconsideration of a Hearing Examiner Decision (SCC 14.06.180)

File # of Appealed Decision or Permit	PL16-0556	**Appeal Fee**	$	*PDS will calculate*
Date of Appealed Decision or Permit	July 13, 2023	**Publication Fee**	$	*PDS will calculate*

PDS staff: do not accept appeal form without full payment of fees

Appellant

Standing to appeal	☐ Permit applicant ■ Party of Record ☐ Party subject to code enforcement order ☐ Other				
Name	Evergreen Islands				
Address	PO BOX 223				
City, State	Anacortes, WA	**Zip**	98221	**Phone**	360-202-1901
Email	tom.glade@comcast.net	**Signature**			

Attorney or Representative ☐ None

Name	Kyle Loring				
Address	PO Box 3356				
City, State	Friday Harbor, WA 98250	**Zip**	98250	**Phone**	360-622-8060
Email	kyle@loringadvising.com				

Attachments

☑ For any of the **appeals** listed above, please attach a concise statement with numbered responses to the following questions.

1. What is your interest in this decision?
2. How are you aggrieved by the decision you are appealing?
3. What are the specific reasons you believe the decision is wrong?
   e.g. erroneous procedures, error in law, error in judgment, discovery of new evidence
4. Describe any new evidence.
5. List relevant sections of Skagit County Code.
6. Describe your desired outcome or changes to the decision.

☐ For a request for **reconsideration** of a Hearing Examiner decision, attach a statement identifying the specific errors alleged.

BEFORE THE BOARD OF COUNTY COMMISSIONERS

IN AND FOR THE COUNTY OF SKAGIT, WASHINGTON

In the Matter of the Appeal of Special Use Permit, PL16-0556, for the expansion of a gravel mine for 60 years.	NO. PL16-0556 **NOTICE OF APPEAL**

INTRODUCTION AND DECISION BEING APPEALED

For the second time in three years, the applicant for the Lake Erie pit mine expansion has declined to evaluate whether a proposal to clear more than 35 acres of land and to mine 60,000 tons of gravel will impact groundwater flow to the residential neighborhood west/northwest of the mine, and thereby destabilize coastal bluffs that already experience landslides. On February 23, 2021, the Skagit County Board of Commissioners ("Board") reversed a Hearing Examiner approval for Special Use Permit PL16-0556 ("Decision") on the grounds that the applicant had not conducted a Geologically Hazardous Area Site Assessment and that Appellant Evergreen Islands had furnished evidence of springs discharging from the bluffs at an elevation downgradient of the inferred groundwater level at the mine. The Board remanded the matter to the Hearing Examiner to determine whether the shoreline bluffs require the preparation of a geological assessment, and if so, to conduct one and impose conditions as necessary to mitigate identified risks.

While the applicant subsequently obtained a document titled 'Geologic Hazard Site Assessment' ("Wood Report"), that document did not evaluate whether the mine would increase groundwater flow to the springs northwest. Instead, the Wood Report continued to ignore the

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

existence of those springs and deferred to the same flawed hydrology report that overlooked the downgradient coastal springs in the first instance. To emphasize, no consultant has examined whether the groundwater found at an elevation of 190 feet at the mine site flows down to groundwater that discharges through those springs at a lower elevation of 165-175 feet, as deemed highly likely by Dan McShane, a licensed engineering geologist. Nevertheless, the Hearing Examiner approved the Permit on remand after concluding that a simple reference to the coastal bluffs demonstrated that the consultant had reviewed this question. Consequently, Evergreen Islands respectfully requests that the Board stand by its February 2021 request for information about the mine's potential impacts on groundwater springs to the west/northwest, and that it remand the new Hearing Examiner decision to obtain that information and examine the mine's risk to the health and safety of the local residential neighborhood. A copy of the Decision on remand is attached hereto as Attachment A.

I. NAME, ADDRESS, AND INTEREST OF APPELLANT.

1.1. Evergreen Islands can be reached as follows:

Evergreen Islands
PO Box 223
Anacortes, WA 98221
360-202-1901
tom.glade@comcast.net

1.2. Evergreen Islands is represented in this appeal by Kyle Loring, who can be reached as follows:

Kyle Loring
Loring Advising PLLC
PO Box 3356
Friday Harbor, WA 98250
360-622-8060
kyle@loringadvising.com

1.3. Evergreen Islands has an interest as a party of record in this matter because organizational representatives and members provided written and oral testimony to the Hearing

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

Examiner prior to the Decision and because Evergreen Islands is the party that obtained the Board's initial order remanding this matter. The Skagit County Code ("SCC") defines a "party of record" as "any person who has testified at a hearing or has submitted a written statement related to a development action and who provides the County with a complete address, or a person who has formally requested to receive information via a written statement with a complete mailing address." SCC 14.04.020. Consequently, because Evergreen Islands testified at the hearing and submitted a written statement related to the mine application, it has standing to appeal the Decision pursuant to SCC 14.06.170(2).

1.4. In addition, Evergreen Islands has an interest in environmental conservation and in safeguarding local communities from unnecessary and unexamined risks of development proposals. Evergreen Islands is a public interest, membership organization that works to conserve natural resources and protect communities in and around Skagit County and the Salish Sea. Evergreen Islands is based in Anacortes. Evergreen Islands' mission is to promote, protect, and defend the unique ecosystems involving the saltwater islands of Skagit County and their environs as they relate to the built and natural environments. Since incorporating in 1977, Evergreen Islands has focused on monitoring and supporting the responsible enforcement of local, state, and national laws that protect the environment. Evergreen Islands board members and members participated in the proceedings before the Hearing Examiner by testifying at the hearing and submitting written comments about the mine.

II. HOW APPELLANT IS AGGRIEVED

2.1. Evergreen Islands and its members would be aggrieved by the Permit's unexamined impacts to the health and safety of residential neighborhoods west and northwest of the mine because some of them inhabit those neighborhoods and by the environmental impacts associated with aggravated landsliding in the coastal bluffs there.

III. SPECIFIC REASONS WHY THE DECISION IS WRONG

3.1. The Decision is clearly erroneous because it approved a Mining Special Use

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

Permit without statutorily-required information for that Permit and without providing information requested by the Board and Skagit County Planning and Development Services ("PDS") on remand. This section should be read in conjunction with Section IV below, which references applicable sections of the Skagit County Code and identifies the application's inconsistencies with those sections.

3.2. The Hearing Examiner erred by approving the Permit on remand without any new hydrogeological information about whether the proposed mine will increase the risk of landslides in unstable slopes in a residential neighborhood to the west/northwest of the mine site. On February 23, 2021, the Board remanded a previous version of the permit back to the Hearing Examiner for further consideration of four 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 Site Assessment, all consistent with SCC 14.24.400-.420 and the Hearing Examiner's discretion;
- 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.

3.3. The Board based its remand decision on the absence of a geologically hazardous area site assessment and evidence from Evergreen Islands that springs in the coastal bluff to the northwest of the Mine exist downgradient of the inferred groundwater level at the mine and that the expanded mine would create an increased landslide risk. This information came from Dan

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

McShane, a Licensed Engineering Geologist with Stratum Group, who has conducted several geological hazard assessments on the bluffs west/northwest of the proposed mine, including field inspections that involved observations of exposed geologic units, hand dug test pits to determine underlying soils and geology units, review of available geologic mapping, lidar imagery, and historical aerial photographs and maps. Based on his geology hazard assessments, perched groundwater flows out of springs and seeps in the hillside and has had a significant impact on slope stability directly northwest of the mine. Mr. McShane has opined that the removal of the trees, soils, and particularly the less permeable glacial till at the mine site likely will allow stormwater to infiltrate into the groundwater and flow to the springs in the coastal bluffs, which lie at an elevation of 165-175 feet above sea level, downgradient of the 190-foot elevation that the applicant identified for groundwater at the mine site. This increased flow would significantly impact the stability of the bluffs, which would in turn, significantly impact homes near the bluffs. Although the application for the mine contained a hydrogeological site assessment by Maul Foster Alongi, Mr. McShane determined after reviewing that report that the author was unaware of the springs to the west/northwest of the mine site and therefore assumed that groundwater flowed to the north based on limited information. Testimony at the June 28, 2023 remand hearing from the author of that report, Thomas Mullen, confirmed that he was unaware of those springs when he wrote the earlier report.

3.4. On March 9, 2021, the Hearing Examiner forwarded the remand request to PDS, which directed the applicant to prepare a Geologically Hazardous Area Site Assessment that addressed the following specific site elements:

- Analysis of the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion and attendant removal of soil and vegetation which could alter groundwater behavior in the vicinity of the mine;
- Analysis of the presence of springs on the coastal bluff to the northwest of the

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

mine that area at an elevation down gradient of the inferred groundwater level; and

- Respond to the testimony of the professional geologist who identified that the proposed mine expansion will create an increased landslide risk.

3.5. After obtaining a proposal in 2021 from a consultant that would have evaluated the mine's impacts on groundwater discharging from the springs, the applicant hired a different consultant in 2022, Wood Environment & Infrastructure Solutions, Inc. The Wood Report prepared by that consultant failed to analyze the landslide risk that could be created by increased groundwater migration to the west/northwest of the mine site. The Wood Report did not acknowledge or evaluate the downgradient springs in the coastal bluffs, and instead assumed that the groundwater at the site flows to the north based on the earlier hydrogeological reports that likewise ignored those springs and that led to the Board's remand of the permit. Based on this unevaluated assumption, the Wood Report concluded that the mine would not impact the coastal bluffs.

3.6. A third-party review engaged by PDS likewise did not independently assess whether groundwater flows downgradient from the mine site at 190 feet above sea level to 165-175 feet above sea level in the coastal bluffs. That document states that the author did not find discrepancies in the earlier Maul Foster Alongi reports, but does not acknowledge the discrepancy between the groundwater elevations at the mine site and the lower elevations of the springs in the unstable coastal bluffs. That document ignores the coastal bluffs to the northwest altogether, instead referring to springs in the Dodson Canyon area to the west/southwest of the mine site, and the higher groundwater elevation there of 200 feet above sea level. The review also vaguely referred to a previously undiscussed "regional aquifer" that presumably would be distinct from groundwater at the mine site, without providing any evidence of the existence of such a feature in the vicinity of the mine site.

3.7. The Hearing Examiner erred in deferring to the Wood Report and the third-party review that failed to examine the question posed on remand – whether groundwater flows from

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

the mine site to the unstable coastal bluffs to the west/northwest of the site and, if so, whether removing more than 35 acres of trees, shrubs, soils, and less permeable glacial till will increase the amount of groundwater that flows from the mine site to the bluffs and further destabilize them and the residential neighborhood above them.

3.8. Specifically, the Hearing Examiner erred when he issued the following findings of fact:

3.8.1. FOF No. 7 – that, relying on the three previous studies cited above, Wood determined that groundwater flow from the mine site flows north and northeast, toward Lake Erie, not west or northwest toward the coastal bluffs.... *Wood did not make an independent determination of the groundwater flow at the site. Instead, Wood accepted the prior assertions of groundwater flow direction without assessing whether it was based on incomplete information.*

3.8.2. FOF No. 7 – that the bluffs are too far away (300 to 800 feet), and groundwater from the site does not flow in that direction. *According to evidence from Dan McShane, it is highly likely that some volume of groundwater flows from the higher elevation at the mine site to the lower elevation in the coastal bluffs west/northwest of the site.*

3.8.3. FOF No. 7 – that the mine would not affect the elevation of the groundwater table, because the excavation at the mine will not extend down into the groundwater table. *The evidence showed that by removing the till layer above the sand and gravel to be excavated, the mine would allow stormwater to infiltrate into and recharge the underlying aquifer, likely affecting the elevation of the groundwater table.*

3.8.4. FOF No. 7 – that stormwater from the mine will be managed and infiltrated on site and would not affect slope stability. *There is no evidence in the record that stormwater will be managed at the site. The application assumes that stormwater will infiltrate into the ground at the site.*

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

3.8.5. FOF No. 9 – the implication that the Watershed Company indicated that it did not find anything that would call into question the determination that groundwater flows in a northeasterly direction (in other words, away from the coastal bluffs), as opposed to a review of data collection and analysis. *The Watershed Company did not make such a broad statement in its report.*

3.8.6. FOF NO. 9 -- that the Watershed Company provided an additional report in which it had reviewed a test well dug in 2017 for the project and had determined that, consistent with other reports, groundwater flow was likely to the north/northeast. *The Watershed Company did not review a test well.*

3.8.7. FOF No. 16 – that Mr. Mullen acknowledged the existence of springs in the coastal bluffs to the northwest of the mine site. *Mr. Mullen was not aware of the existence of the springs in the bluffs and testified that: (1) he had not looked into the issue since his initial reports; (2) he had not received Dan McShane's report until one to two days before the hearing; and (3) he had not reviewed McShane's opinions about the seeps northwest of the mine site.*

3.8.8. FOF No. 18 – that Dan McShane "acknowledged that groundwater from the mine flows east." *Mr. McShane has opined that shallow water above the till layer likely follows the surface topography and flows to the east, but that once the largely-impervious till layer is removed in order to mine the underlying sand and gravel, the infiltrated stormwater will increase the amount of water in the aquifer that likely discharges to the landslide area.*

3.8.9. FOF No. 18 – that the issue of changed direction of groundwater flow is the main issue that Dan McShane believes requires additional study. *Mr. McShane opined that the issue that requires additional study is the amount of increased volume of groundwater that would flow to the west/northwest once the till layer is removed above the sand and gravel to be mined.*

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

3.9. The Decision also includes the following erroneous conclusions of law ("COL"):

3.9.1. COL No. 2 – that the Geologically Hazardous Area Site Assessment drafted by Wood is consistent with SCC 14.24.400-.420.

3.9.2. COL No. 2 – that the geologically hazardous areas site assessment is compliant with the Board of County Commissioner's order on remand.

3.9.3. COL No. 2 and associated findings of fact – that the proposed mine expansion is not being built within 200 feet of a known or suspected risk, as contemplated in SCC 14.24.420(1), and that a geologically hazardous site assessment would not normally be triggered in the first place under SCC 14.24.420(1).

3.9.4. COL No. 2 and associated finding of fact – that a geologically hazardous site assessment was ordered out of an abundance of caution.

3.9.5. COL No. 2 – that the Hearing Examiner has the discretion to waive Skagit County Code requirements.

3.9.6. COL No. 2 and associated finding of fact – that the applicant's geologically hazardous area site assessment is adequate to the task required on remand to assess the possibility that groundwater flow altered by the proposed mine expansion could affect the coastal bluffs northwest of the site.

3.9.7. COL No. 3 and associated finding of fact – that the preponderance of the evidence supports the conclusions of the Wood Report that the proposed mine would not jeopardize the stability of the coastal bluffs to the northwest of the proposed mine expansion, including the findings that:

3.9.7.1. the author of the Wood Report was aware of the seeps or springs that emerge from the coastal bluffs northwest of the mine site;

3.9.7.2. that the author concluded independently that the proposed mine expansion will not affect the groundwater seeping from the coastal bluffs;

3.9.7.3. that the author concluded that groundwater beneath the

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

mine flows north and northeast, rather than merely repeating that assumption from the earlier hydrology study;

3.9.7.4. that Thomas Mullen drilled three test wells in and around the mine pit;

3.9.7.5. that the applicant made a *prima facie* showing that groundwater flows from the mine site will not increase the jeopardy of the northwestern bluffs;

3.9.7.6. that the applicant's reviews and the County's third-party reviewer did not overlook the northwestern bluffs or that Mr. Wentworth and Mr. Mullen provided specific discussion of those bluffs;

3.9.7.7. that the County's third-party reviewer was not confused about which bluffs were supposed to be the subject of a geologically hazardous area site assessment;

3.9.7.8. that Dan McShane believes that groundwater at the site currently flows exclusively to the north/northeast;

3.9.7.9. that Dan McShane supplied no groundwater flow analysis of his own, that his concern about northwestern groundwater flow is speculative, and that his concerns have been considered by the Wood Report and third-party review;

3.9.7.10. that Mr. McShane commented that the applicant should drill wells on properties not owned or controlled by the applicant;

3.9.7.11. that there is no evidence showing a substantial likelihood that northwestern flow will occur;

3.9.7.12. that the Wood Report and third-party review made any conclusion related to northwestern groundwater flow based on on-site wells and topographical review;

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

3.9.7.13. that further assessment of the dangers to the northwestern bluffs has occurred;

3.9.7.14. that the existing evidence shows groundwater flow from the mine site that does not jeopardize the northwestern cliffs, and none of the evidence put forward in rebuttal shows otherwise; and

3.9.7.15. that the evidence in the record is sufficient to satisfy the order on remand.

IV. RELEVANT SECTIONS OF SKAGIT COUNTY CODE

Applicable sections of the Skagit County Code and related errors in the Permit approval include the following:

4.1. SCC 14.16.440. Mineral Resource Overlay. The application requirements at SCC 14.16.440(8)(b) and (8)(g), the hearing examiner review criteria at SCC 14.16.440(9), and the incorporation by SCC 14.16.440(11) of the requirements at SCC 14.16.900 are applicable.

4.2. SCC 14.16.440(8)(b) requires a report by a qualified geologist, hydrogeologist, or licensed engineer that characterizes the area's groundwater, including: (a) a description of the geology and hydro-geology of the area, such as the delineation of aquifer, aquitards, or aquicludes, hydrogeologic cross-sections, porosity and horizontal and vertical permeability estimates; (b) a determination of the direction and velocity of ground water movement, water table contour and potentiometric surface maps, if applicable; and (c) a map containing the limits of the mine, buffer zones, location of all ground water wells within 1 mile distance down gradient from the property boundaries, location of all perennial streams and springs, and definition or specification of locations of aquifer recharge and discharge areas. *The Wood Report that the Hearing Examiner relied upon did not include a map showing the wells and springs in the vicinity of the mine property—the applicant still has not acknowledged the downgradient springs to the northwest of the site—and therefore also has not determined the direction and velocity of groundwater movement at the site absent this information.*

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

4.3. SCC 14.16.440(8)(g) requires the identification and description of those critical areas designated and regulated by Chapter 14.24 SCC, together with any critical areas studies required by Chapter 14.24 SCC. *The application did not identify and describe unstable slopes to the west and northwest or substantively evaluate the proposed mine's impacts on those unstable slopes.*

4.4. SCC 14.16.440(9)(a) requires the Hearing Examiner to evaluate mining special use permits against the Skagit County Code's special use approval criteria and also imposes the burden of proof on the applicant to show that impacts are mitigatable to warrant permit approval. *The application omits information that would be necessary to demonstrate that the mine project's potential slope instability impacts are consistent with the special use criteria and that they are mitigatable and have been properly conditioned to mitigate their impacts.*

4.5. SCC 14.16.440(9)(b) directs the Hearing Examiner to consider the requirements of Chapter 14.16 SCC as minimum standards based on unique site-specific factors or conditions as appropriate to protect public health, safety, and the environment. *The mine proposal does not offer sufficient information to determine whether it meets the minimum standards of Chapter 14.16 to protect public health, safety, and the environment. For example, the Wood Report does not evaluate the impacts of deforestation, soil, till, and rock removal on the slopes to the northwest.*

4.6. SCC 14.16.440(9)(c) states that appropriate site-specific conditions shall be required to mitigate existing and potential incompatibilities between the mineral extraction operation and adjacent properties. *The lack of information about the mine's potential impacts on the adjacent unstable slope prevented the identification and application of mitigating conditions to address that risk.*

4.7. SCC 14.16.440(9)(d) requires appropriate site-specific conditions to mitigate stormwater runoff and erosion impact. *The absence of sufficient, accurate information about the hydrogeologic regime at the mining site prevented the requisite examination and application of*

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

instability. Mr. McShane argues that this chain of possibilities demands further investigation, including test wells dug off-site of the mine to the northwest.

The Hearing Examiner is not persuaded by Mr. McShane's attack on the work of Mr. Wentworth, Mr. Mullen, and The Watershed Company. Mr. McShane has not demonstrated that groundwater will flow to the northwest if the proposed mine expansion is excavated. He supplied no groundwater flow analysis or modeling of his own to show a northwestern flow under various configurations of the mine. His concern about northwestern flow is speculative. That speculation has now been considered in the Wood Assessment and The Watershed Company's review, and those authors did not see any reason to believe northwestern flow would occur.

It is true that the Applicant and third-party reviewers themselves have not conducted groundwater flow analysis or modeling under various configurations of the mine. Part of Mr. McShane's attack on their work is that they should have performed such analysis, including the digging of test wells to the northwest, on the properties not owned or controlled by the Applicant. The Hearing Examiner agrees that such investigations would have led to a stronger, more persuasive Geologically Hazardous Areas Site Assessment, but, in the absence of evidence showing a substantial likelihood that northwestern flow will occur, it is not reasonable to require the Applicant or the County to conduct offsite, physical investigations to rebut speculation that it might occur. A speculative attack on the Geologically Hazardous Areas Site Assessment is not enough to outweigh the authors' and reviewers' conclusions, which were based on on-site wells as well as topographical review.

The order on remand required further assessment of the dangers to the northwestern bluffs. That assessment has now occurred. Not every assessment requires new test wells or modeling. Many assessments (including Mr. McShane's own reviews) are based on a simple site visit and a review of the existing data. Although more testing and more data would always be welcome, the Hearing Examiner cannot conclude that they would be required here. The existing evidence shows groundwater flow from the mine site that does not jeopardize the northwestern cliffs, and none of the evidence put forward in rebuttal shows otherwise. The Hearing Examine concludes that the Geologically Hazardous Areas Site Assessment, and the evidence in the record, is sufficient to satisfy the order on remand. *Findings 1 – 33,*

4. **Additional conditions are necessary to mitigate risks identified during the supplemental proceedings**. County staff recommended the Hearing Examiner retain the conditions of approval set forth in the original decision and add five new conditions relating to the geotechnical work that has been performed on remand. County staff recommend that recommendations set forth in the Geologically Hazardous Areas Site Assessment, and The Watershed Company's Third-Party Review, be added to the

mitigating conditions.

4.8. SCC 14.16.900. Special use permits. A special use permit must demonstrate that the proposed activity will not adversely affect or prevent those uses normally allowed within the respective district. The applicant bears the burden of proving through evidence in the application that:

(A) The proposed use will be compatible with existing and planned land use.

(B) The proposed use complies with the Skagit County Code.

(C) The proposed use will not create undue noise, odor, heat, vibration, air and water pollution impacts on surrounding, existing, or potential dwelling units, based on the performance standards of SCC 14.16.840.

(D) The proposed use will not generate intrusions on privacy of surrounding uses.

(E) The proposed use will not cause potential adverse effects on the general public health, safety, and welfare.

(F) For special uses in Industrial Forest—Natural Resource Lands, Secondary Forest—Natural Resource Lands, Agricultural—Natural Resource Lands, and Rural Resource—Natural Resource Lands, the impacts on long-term natural resource management and production will be minimized.

(G) The proposed use is not in conflict with the health and safety of the community.

(H) The proposed use will be supported by adequate public facilities or services and will not adversely affect public services to the surrounding areas, or conditions can be established to mitigate adverse impacts on such facilities.

(I) The proposed use will maintain the character, landscape and lifestyle of the rural area. For new uses, proximity to existing businesses operating via special use permit shall be reviewed and considered for cumulative impacts.

Due to the mine's potential to increase groundwater flow to the unstable coastal bluffs to the northwest and the concomitant risk of landslides in the residential neighborhood there, the application does not demonstrate that the proposed mine complies with the Skagit County Code,

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

that it will not cause potential adverse effects on the general public health, safety, and welfare, that it is not in conflict with the health and safety of the community, and that it will maintain the character, landscape, and lifestyle of the rural area that has grown up around the site.

4.9. SCC 14.24.410(2). The slopes immediately to the west and northwest of the mine property qualify as landslide hazard areas pursuant to SCC 14.24.410(2) because they are: (a) areas designated in the Department of Ecology, Coastal Zone Atlas of Washington as Unstable, with a recent slide; (b) slopes with a gradient of 15% or greater than intersect geologic contacts with permeable sediments overlying low-permeability sediment or bedrock with springs or groundwater seepage; (c) slopes of 40% or steeper with a vertical relief of 10 feet or more; (d) areas of previous failure such as landslides or failures as observed in the field or as indicated by official maps; and (e) potentially unstable areas resulting from rapid stream incision, stream band erosion, and undercutting by wave action. SCC 14.24.410(2)(a), (b)(i), (c), (d), and (e).

4.10. SCC 14.24.420. This section requires the preparation by a qualified professional of a geologic hazard site assessment for the mine because it lies within 200 feet of an area of known or suspected risk for geologically unstable condition and the geologic condition may pose a risk to life and property, or other critical areas on and off the project area. SCC 14.24.420(1). Skagit County's geologically hazardous site areas assessment requirements also direct applicants to provide a site plan that indicates the location of all significant geologic features like "springs" and "seeps," and to describe the extent and type of vegetative cover, and provides that the County's Administrative Official may require additional site assessment elements. SCC 14.24.420(2)(a), (b), and (g).

4.11. *While the applicant has now obtained a document titled a geologically hazardous area site assessment, that document does not provide a site plan that shows springs and seeps in coastal bluffs to the west and northwest of the site. Nor does it describe the extent and type of vegetative cover at the site and assess likely groundwater impacts from removing*

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

that vegetation and glacial till. And last, the Report does not evaluate the potential for the mining operations to increase the volume of groundwater that exits the ground through springs downgradient of the mine site's inferred groundwater level and to cause landslides in the unstable bluffs west and northwest of the site. A licensed engineering geologist hired by Evergreen Islands has identified this as a meaningful risk associated with the removal of trees, shrubs, soils, and the underlying, low-permeability glacial till at the mine site. That action will increase groundwater recharge in a manner that has the potential to impact the deep-seated landslide areas to the west/northwest because it is highly probable that the mine site lies within the groundwater recharge area for the slide areas.

4.12. *The applicant also has not responded to the additional information requests set forth by the County. The applicant has not analyzed the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine, has not analyzed the presence of downgradient springs on the coastal bluff northwest of the mine, and has not responded to Dan McShane's testimony that the proposed mine expansion will create an increased landslide risk.*

4.13. SCC 14.24.430. Geologically hazardous area mitigation standards. *The applicant has not caused the preparation of a mitigation plan by a qualified professional to address items such as stormwater.*

V. DESIRED OUTCOME/RELIEF REQUESTED

Evergreen Islands respectfully requests the following relief:

5.1. that the Board of County Commissioners reverse the Hearing Examiner's July 13, 2020 decision approving Special Use Permit PL16-0556 as clearly erroneous, vacate the permit, and adopt its own findings, conclusions, and decision based on the record before the Hearing Examiner; or

5.2. that the Board reverse the Hearing Examiner Decision and remand the matter to the Hearing Examiner again to ascertain the project's impacts on the adjacent unstable coastal

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

bluffs to the west and northwest of the site; and

5.3. Such other and further relief as the Board deems just and equitable.

Dated this 26th day of July, 2023.

Respectfully submitted,

LORING ADVISING PLLC

By _____
Kyle A. Loring, WSBA No. 34603
Attorney for Evergreen Islands

LORING ADVISING PLLC
P.O. BOX 3356
FRIDAY HARBOR, WA 98250
TEL: (360) 622-8060 | FAX: (360) 378-0335
kyle@loringadvising.com

ATTACHMENT A

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 LLC	)	Lake Erie Pit Special Use Permit
	)	
	)	FINDINGS, CONCLUSIONS,
For a Special Use Permit	)	AND DECISION ON 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 **APPROVED**. Conditions are necessary to address specific impacts of the proposal.

SUMMARY OF RECORD

Hearing Date:
On June 28, 2023, 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.

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

Kevin Cricchio, County Senior Planner
Todd Wentworth, Wood Environment & Infrastructure Services, Inc.
William Wooding, Applicant Representative
Thomas Mullen, Northwest Groundwater Consultants
Kyle Loring, Attorney for Appellant Evergreen Islands
Dan McShane, Stratum Group
Tom Glade, Evergreen Islands
Marlene Finley, Evergreen Islands
Brian Wetter, Evergreen Islands
Micael Raphael, Evergreen Islands
Konrad Kurp, Evergreen Islands
Jan Heald Robinson, Evergreen Islands
Linda Dobbs, Evergreen Islands
Brinkley Meyers
Franky Parker
Jake Olliffe

Heidi Fish
Deanna Claus
Stewart Toshach
Ellen Bynum, Friends of Skagit County

Exhibits:
The following exhibits admitted into the record during the August 26, 2020, open record public hearing[1] 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
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

[1] The August 26, 2020, hearing continued on October 14, 2020. *Exhibit 24.*

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, 2023[2]
36. Notice of Public Hearing, published June 8, 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

[2] The revised exhibit was received March 31, 2023, but was still dated January 18, 2023.

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

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. *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),[3] 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.

[3] 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.

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

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, and members of the public, including the Appellant, Evergreen Islands (all discussed below), 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. Consistent with the Board of County Commissioners' direction, the Hearing Examiner will not revisit issues other than those related to the Geologically Hazardous Area Site Assessment and the County staff and public responses thereto. All other findings and conclusions set forth in the original decision, dated November 30, 2020, remain undisturbed and are hereby incorporated by reference. *Exhibit 24.*

Notice of Public Hearing on Remand

5. On June 8, 2023, the County published notice of the public hearing on remand. The notice was published in the *Skagit Valley Herald* newspaper, posted on the subject property, mailed to neighboring landowners within 300 feet of the subject parcel, and mailed and emailed to all parties of record. *Exhibit 38, Addendum to Staff Report, pages 1 through 4; Exhibit 36.*

Issues on Remand

6. County staff reviewed the Applicant's Geologically Hazardous Area Site Assessment, and the materials provided by the Applicant and public in response thereto, to determine whether the Geologically Hazardous Area Site Assessment satisfied the direction of the Board of County Commissioners. Staff reviewed the materials submitted, the special use permit criteria, the Hearing Examiner's original decision, and the previous issued SEPA

MDNS. Staff concluded that these materials were adequate to respond to the Board of County Commissioners remand, and that the proposed expansion should be approved, subject to both the conditions in the Hearing Examiner's original decision and five new conditions recommended by staff. *Exhibit 38, Addendum to Staff Report, pages 1 through 4; Exhibit 7; Exhibit 24; Exhibits 31 through 35; Exhibit 39.*

Geologically Hazardous Area Site Assessment

7. The Geologically Hazardous Area Site Assessment (Wood Assessment) was prepared by Wood Environment & Infrastructure Solutions, Inc. (Wood), on August 11, 2022. The Assessment involved a site visit to the existing gravel pit and the proposed expansion area. The Assessment also relied on previously published reviews of site geology and groundwater:

- Lake Erie Pit Well Reconnaissance (NWGC, 2019)[4];
- Observation Well Installation (Maul Foster Alongi, 2017)[5]; and
- Hydrogeologic Site Assessment Report (Maul Foster Alongi, 2016).[6]

Wood also reviewed County LIDAR imagery for evidence of erosion along the coastal bluffs northwest of the site—the steep areas identified by the Board of County Commissioners as the reason for the remand. Wood determined that:

> The head scarp of the nearest coastal bluff is approximately 300 feet northwest of the northwest sidewall of the existing Pit 1 and is approximately 800 feet northwest of the proposed expansion. Rosario Road runs between the site and the coastal bluffs, and the cut slope between Rosario Road and the site is clearly visible. The cut slope graded for Rosario Road is not considered a geologic hazard as it is not a natural slope but is an engineered and maintained slope.

Relying on the three previous studies cited above, Wood determined that groundwater flow from the mine site flows north and northeast, toward Lake Erie, not west or northwest toward the coastal bluffs. In a section of the Assessment devoted specifically to the coastal bluffs, Wood stated that the proposed expansion would not have any impact on the bluffs. The bluffs are too far away (300 to 800 feet), and groundwater from the site does not flow in that direction. Nor would the mine affect the elevation of the groundwater table, because excavation at the mine will not extend down into the groundwater table. Stormwater from the mine will be managed and infiltrated on site and would not affect slope stability. *Exhibit 31.*

Evergreen Islands Response to Geologically Hazardous Area Site Assessment

[4] In the record as Exhibit 12.
[5] In the record as Exhibit 10.
[6] In the record as Exhibit 9.

8. The first response to the Wood Assessment came from Evergreen Islands, the Appellant to the Hearing Examiner's original decision. Evergreen Islands submitted a comment dated November 18, 2022, with an attached review by geologist Dan McShane, of Stratum Group, dated November 15, 2022. In his November 2022 review, Mr. McShane called the County's attention to a March 23, 2021, communications between County staff and the Applicant (Exhibit 28), which occurred following the remand from the Board of County Commissioners but before the Applicant had submitted any responsive materials. In the March 23, 2021, communication, County staff requested that the Applicant supply certain specific analyses in respond the remand:

- Analyze the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion and attendant removal of soil and vegetation which could alter groundwater behavior in the vicinity of the mine.
- Analyze the presence of springs on the coastal bluff to the northwest of the mine that are at an elevation down gradient of the inferred groundwater level.
- Respond to the testimony of the professional geologist who identified that the proposed mine expansion will create an increased landslide risk.

Mr. McShane argued that the Wood Assessment had not supplied analysis of these specific issues. Instead, the Wood Assessment had simply relied on the three earlier reports, which, according to Mr. McShane, did not analyze the groundwater flow direction toward the coastal bluffs, did not discuss the presence of springs in the coastal bluffs, and did not respond to Mr. McShane's earlier comments. *Exhibit 28; Exhibit 32.*

Third-Party Review

9. The next response came from the County's third-party reviewer, The Watershed Company, which reviewed both the Wood Assessment and Mr. McShane's November 2022 response. In its Third-Party Review, the Watershed Company reviewed the three groundwater analyses that the Wood Assessment had relied upon, and which Mr. McShane had called inadequate. The Watershed Company found no discrepancies or inaccuracies in the data collection or analysis, nor anything else that would call into question the determination that groundwater flows in a northeasterly direction (in other words, away from the coastal bluffs). According to The Watershed Company:

> The lithology is reasonably consistent with the well logs, the groundwater levels were developed from a comprehensive mass well measurement, and the flow paths were plotted perpendicular to the groundwater surface contours. The aquifer is well characterized at recorded depths and static water levels. The prevailing groundwater flow path is to the north and northeast of the proposed project.

The Watershed Company discussed the mine's potential to threaten bluffs to the west and southwest of the proposed mine expansion and found that the bluffs were 800 to 1,000 feet from the proposed expansion area. It concluded that groundwater seepage coming from the bluffs is likely from a regional aquifer. The Watershed Company found no reason to conclude that the proposed mine would change the rate or volume of groundwater seeping from the bluffs.

In its January 18, 2023, report the Watershed Company also provided its own additional report, dated November 25, 2022, regarding the project, in which it had reviewed a test well dug in 2017 for the project and had determined that, consistent with other reports, groundwater flow was likely to the north/northeast. *Exhibit 33*.[7]

Evergreen Islands Response to Third-Party Review

10. On March 3, 2023, Evergreen Island provided a response to the Third-Party Review, with an attached report by its geologist, Mr. McShane, dated March 2, 2023. In his March 2023 review, Mr. McShane argued that The Watershed Company had focused on bluffs to the west and southwest of the proposed mine site, not bluffs to the west and northwest of the site. Mr. McShane argued that the springs in the coastal bluffs to the northwest of the site had never been identified or discussed by anyone other than himself, and this omission was not consistent with the County's guidance of March 23, 2021 (Exhibit 28). He also argued that there has never been any direct measurement of groundwater elevations between the mine site and the northwest bluffs—all previous assessments were based on measurements nearby, but not directly along that flow path. Mr. McShane argued that these previous assessments were flawed even on their own terms, in that water levels measured directly by Northwest Groundwater Consultants (NWGC) (one of the three studies relied on by the Wood Assessment) were 50 feet and 35 feet lower than those identified on the groundwater contour map produced by Maul Foster (the other two of the three studies relied on by the Wood Assessment). Mr. McShane argued that springs in the coastal bluffs to the northwest of the site were a major driver of the slopes' instability, and that groundwater flow to the bluffs, if it does indeed occur, could contribute to these springs. According to Mr. McShane, "The role of groundwater flow to the bluff remains unevaluated." *Exhibit 34*.

Public Comments

11. The County received public comments from dozens of individuals. In summary, the overwhelming majority of these comments called for additional studies of slope stability. Commenters argued that the materials submitted on remand did not constitute a new study but merely a rehash of old material. Commenters argued that the proposed mine expansion would further destabilize bluffs in the area (not just the bluffs to the northwest,

[7] A revised version of the Third-Party Review (Exhibit 33) appears in Exhibit 35, but that exhibit merely changes the format of the Exhibit 33 version. It does not change the text. *Exhibit 38, Addendum to Staff Report, page 3; Exhibit 35.*

but also to the west and southwest) and that houses atop the bluffs could be jeopardized as a result. Several of the comments identified the presence of springs in the coastal bluffs. Some of the comments also raised issued unrelated to slope stability, such as noise, traffic, and air quality, each of which, commenters argued, would be worsened by the proposed mine expansion. *Exhibit 39*.

12. One of the comments included an attached geological assessment, the "Geary Preserve Bluff Geological Assessment," prepared in support of Skagit County project no. 21-051, and dated August 12, 2021. The Geary Preserve Assessment analyzed coastal bluffs to the west/northwest of the mine site—the same that are the basis for the remand—albeit the Geary Preserve Assessment was for a project unrelated to the proposed mine expansion. The Geary Preserve Assessment observed "intermittent seepage within the lower exposed bluff as well as widespread colluvium at the base of the bluff." The Geary Preserve Assessment found that:

> Drainage patterns near the bluff crest were altered by development of the road and parcels, along with roadside ditch installation. As the headscarps for these large landslides are some distance from the beach and separated by narrow channels, landslides of this type are likely not triggered by marine erosion and rather by groundwater, surficial wetness, and the stratigraphy of the bluff, although long-term wave attack does result in the bluffs being in an "oversteepened" condition in much of the bluff shore. Bluff toe erosion from wave attack was not commonly observed during our field visit.

However, the Geary Preserve Assessment did not analyze groundwater flow direction in the vicinity of the coastal bluffs or the mine site. It did not mention the mine as a contributor to the altered drainage patterns that affect the stability of the bluffs. Instead, as quoted above, it cited the development of the roads and parcels, which lie closer to the bluffs than the mine site does. The Geary Preserve Assessment specifically cited the actions of some homeowners as contributing the erosion of the coastal bluffs, including "performing maximum view enhancement actions by topping or excessively limbing trees, likely contributing to increased slope instability."

The Geary Preserve Assessment recommended restrictions on coastal homeowners' activities, including avoiding topping trees and less-aggressive limbing of trees. It recommended that homeowners use swales to deal with stormwater whenever possible, rather than tightlines down the bluffs, and that any tightlines that are necessary be made of high-density polyethylene instead of cheaper, more failure-prone plastics. In some cases, the Geary Preserve Assessment stated that houses that are too close to the bluffs may need to be relocated landward: "House relocation is becoming more common in the greater Puget Sound area … and offers owners more security and the ability to work on

other long-term issues." The Geary Preserve Assessment did not analyze the existing mine or the proposed mine expansion, nor did it include any recommendations for or against mine expansion. *Exhibit 39.*

Testimony

13. 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 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. There will be no rock screening, rock crushing, or blasting. A 100-foot buffer will be maintained around the site.

Mr. Cricchio set forth the procedural history of the original decision, the appeal, the remand, the denial of the application, and the reversal of the denial, leading to today's hearing on remand. He described the Geologically Hazardous Area Site Assessment and the third-party and Appellant reviews thereof. Based on the Geologically Hazardous Area Site Assessment, Mr. Cricchio recommended approval of the mine expansion with five new conditions, as well as leaving undisturbed the conditions of approval in the Hearing Examiner's original decision. The five new conditions include reimbursement of the County for the expense of Third-Party Review, plus compliance with the recommendations in the Geologically Hazardous Area Site Assessment and Third-Party Review reports. Mr. Cricchio acknowledged that he is not a geologist, but the geologists' reviews and recommendations struck him as adequate and reasonable to allow the project to move forward. *Testimony of Kevin Cricchio.*

14. Todd Wentworth is the consulting geotechnical engineer to the Applicant and the author of the Geologically Hazardous Area Site Assessment. He testified that he relied on the hydrogeology reports cited in his report to determine that groundwater would not flow in the direction of the coastal bluffs to the northwest of the mine site. He concluded that standard mine buffers and the normal mine reclamation process would be adequate to protect slopes in the vicinity. He did not see any reason to require the Applicant to take any mitigation measures other than those that would apply to any mine anywhere.

Mr. Wentworth acknowledged, in response to the testimony of Dan McShane (summarized below), that groundwater does seep out of the coastal bluffs to the northwest of the mine site. He deferred to hydrologist Thomas Mullen (whose testimony is also summarized below) as to whether the mine would change the flow direction of groundwater. But, if the mine did not change the flow direction of groundwater, then Mr.

Wentworth was comfortable in his assessment that the mine would not increase the danger of slope instability. *Testimony of Todd Wentworth.*

15. William Wooding is the Applicant Representative and owner of the mine. He testified that the mine pit has actually been there since the 1930s. He had been the owner and operator since the 1960s. He recognized that his mine required a special use permit because it had exceeded certain limits in the code. He testified that the actual volume of material leaving the mine would, in all likelihood, be far lower than the numbers Mr. Cricchio had cited as a possible maximum. He affirmed that, in his opinion and experience, water from the mine had always drained to the north or east, not the west. *Testimony of William Wooding.*

16. Thomas Mullen, geologist, is a project consultant for the Applicant. He is affiliated with Northwest Groundwater Consultants (NWGC). He prepared some of the underlying hydrology reports upon which Mr. Wentworth based the Geologically Hazardous Area Site Assessment. Mr. Mullen testified that he did a well reconnaissance in March 2019 in which he measured groundwater levels in three wells in and around the mine pit. Based on these measurements, he concluded that groundwater was flowing off the site in a north/northeasterly direction.

    Mr. Mullen acknowledged the existence of springs in the coastal bluffs to the northwest of the mine site, as identified in the review of Mr. McShane. He testified that he did not believe groundwater flow from the mine site would have a detrimental effect on those springs. He acknowledged that he had not reviewed the Geologically Hazardous Area Site Assessment.

    In response to Mr. McShane's testimony (summarized below) and Mr. Wentworth's testimony (summarized above), Mr. Mullen testified that there are no groundwater monitoring wells to the northwest of the mine site. He testified that excavation of the mine will not go down to the groundwater table but rather will be 50 to 100 feet above groundwater. He believed that stormwater conveyances would mitigate any infiltration of stormwater into the groundwater table and thus, nothing about the mine's operation would affect the groundwater table in the vicinity of the coastal bluffs. *Testimony of Thomas Mullen.*

17. Kyle Loring, attorney for Appellant Evergreen Islands, argued that the Board of County Commissioners had remanded the Hearing Examiner's original decision to consider issued raised by geologist Dan McShane regarding groundwater flow, and that the materials now before the Examiner did not consider those issues. Mr. Loring argued that, although some groundwater may flow north or northeast, as described by Mr. Mullen, it did not preclude that other groundwater may flow northwest—a possibility, he argued, that has never been studied by any of the reviewers. He said the Geologically Hazardous

Area Site Assessment simply assumed away the issue by relying on earlier groundwater studies that were already in the record prior to the remand. No new, physical investigations have been conducted. The third-party reviewer also did not conduct its own physical investigations and even appeared to misunderstand which coastal bluffs concerned the County Commissioners—the northwestern bluffs, not the southwestern bluffs or Dodsen Canyon. *Testimony of Kyle Loring.*

18. Dan McShane, geologist from the Stratum Group hired by Evergreen Islands, testified about his review of the Geologically Hazardous Area Site Assessment prepared by Wood and the Third-Party Review prepared by The Watershed Company. Mr. McShane testified that he had done some earlier work on the coastal bluffs to the northwest of the mine site, which is how he knew about the springs in the bluff in the first place. He described the springs as evidence of a "blowout failure," a form of slope instability, a photograph of which is in his report of March 2, 2023 (attachment to Exhibit 34). Mr. McShane testified that the LIDAR imagery (also in Exhibit 34) shows that slope failures intrude quite far landward of the coast, such that groundwater from the mine site could, potentially, interact with the slope failures. He acknowledged that groundwater from the mine flows east, but he said that flow direction was due to the presence of a layer of glacial till. If glacial till were to be removed in the course of mining, the groundwater flow direction could change. Potentially, it could flow to the northwest and interact with the slope failures, by contributing additional groundwater to the groundwater that already seeps out from the coastal bluffs to the northwest. This possibility, of changed groundwater flow, is the main issue he believed required additional study. Mr. McShane acknowledged that he, himself, had not studied whether groundwater would flow to the northwest if mining were expanded. He testified that the elevation of the springs of 165 to 175 feet implied that groundwater, or at least a portion of groundwater, was "probably" flowing northwest, because the springs are downgradient of groundwater at the mine site. He thought that the proposed mine could "very well" affect the groundwater table at the coastal bluffs, because the groundwater table at the proposed mine site is higher than the springs and because the mine could remove some of the overlying glacial till which current directs groundwater to the northeast. *Testimony of Dan McShane.*

19. Tom Glade, the vice president of Evergreen Islands, testified that slope erosion reaches all the way to Rosario Road. There have been landslides in the area in the past, and the bluffs are eroding during storms. He testified that the mine expansion would jeopardize Rosario Road. *Testimony of Tom Glade.*

20. Marlene Finley is on the board of directors of Evergreen Islands. She testified that the application is not ripe for decision because the application is incomplete. She said the materials still do not address risks from landslide, so the materials are not responsive to the County staff and County Commissioners' concerns. *Testimony of Marlene Finley.*

21. Brian Wetter is a member of Evergreen Islands. He described the history of the organization as a 501(C)(3) organization in existence in and around Fidalgo Island since 1978. He spoke highly of Applicant Mr. Wooding's community activities over many years. Mr. Wetter said the Applicant's geotechnical consultants had served him poorly because they were still failing to analyze the risks that the County Commissioners raised. No new work had been done, and no new on-site data has been collected. *Testimony of Brian Wetter.*

22. Micael Raphael is a member of Evergreen Islands. She lives approximately 1,200 feet from the proposed mine expansion. She argued that a Department of Ecology map shows that 50 percent of all water will run west of the mine toward the coastline. She said that previous studies in the area had revealed issues related to slope instability. She said the mine expansion would jeopardize lateral slope support on properties adjacent to the mine, in violation of SCC 14.26.465. *Testimony of Micael Raphael.*

23. Konrad Kurp is a member of Evergreen Islands and a civil engineer. He testified favorably about the Applicant as a person, but he said the proposed mine expansion still needed review because the geologists had not done the work required. Seepage on the northwest cliffs implies there is an underlying clay layer that pushes the water out of the cliff face. The mine is above that clay layer. The increase in groundwater infiltration at the expanded mine site is significant, because the clay layer will have been removed by mining. The clay layer currently forces runoff to the northeast, but once it is gone, groundwater may run in a different direction. Mr. Kurp recommended that the mine not be expanded. *Testimony of Konrad Kurp.*

24. Jan Heald Robinson is on the board of Evergreen Islands and a neighbor of the existing mine pit. She said that members of the community who oppose the mine are not newcomers. Her own family has been there since in the 1890s. She testified that 16 homes on the bluff above Burrows Bay will be placed at risk by the expansion of the mine. An additional 75 homes risk losing their water systems. Rosario Road was also placed at risk. She said that new studies were required prior to approval of the proposed mine expansion, as requested by the County. *Testimony of Jan Heald Robinson.*

25. Linda Dobbs is a member of Evergreen Islands and a member of the Sunset Lane Homeowners Association (HOA). The HOA is very close to the entrance to the pit, north and west of the mine site along the bluff. She said one of the member homeowners had suffered one of the cliff blowouts. Ms. Dobbs said the Commissioners had one requirement: an analysis of groundwater to the northwest. She said no such analysis had been done. *Testimony of Linda Dobbs.*

26. Brinkley Meyers testified that she and her husband live in one of the houses on Rosario Road that are at risk. She was the commenter who had submitted into the record the

"Geary Preserve Bluff Geological Assessment" in Exhibit 39. She said the Geary Preserve Assessment directly contradicted the Applicant's materials with regards to groundwater flow and rainwater flow. Ms. Meyers testified that the slope below her property is eroding. She said the Skagit County Shoreline Master Program recommending halting any works in the area because of its instability. She said the County had told her she couldn't build so much as a stairway down the bluff, so she did not understand why the nearby mine could be expanded. *Testimony of Brinkley Meyers.*

27. Franky Parker is the president of the Sunset Lane Homeowners Association. He testified that every member of the HOA is opposed to the mine expansion. He said blowouts in the bluff are already happening. He said the absence of groundwater monitoring wells to the north and northwest of the mine was unacceptable. He said that County property was available for wells to be drilled. He said the Geary Preserve Assessment shows depressional erosion to the northwest of the mine site. Mr. Parker said that there could be another clay layer that nobody knows about. In addition, he said that mine reclamation would not occur for 60 years, so water seepage needed to be analyzed now. He said the new analysis was based on old data, which did not look at the west side of Rosario Road but only at the east of the Rosario Road. *Testimony of Franky Parker.*

28. Jake Olliffe testified that the mine expansion will collect more water. The additional water will lead to more danger for nearby homes. The springs in the bluffs are already substantial—so much so that his dog can drink from them. *Testimony of Jake Olliffe.*

29. Heidi Fish testified that the County's first priority should be the keep the community safe and healthy and harmonious. She said there needed to be new hydrological studies to assess the direction of groundwater flow. She said the slopes are not stable, and her own backyard is eroding. She also said the gravel pit wall was not stable. She urged the Hearing Examiner to deny the application outright. *Testimony of Heidi Fish.*

30. Deanna Claus testified favorably about the Applicant's character. She said the expansion of the pit was a scary idea because of the slope instability. She said the mine was already quite large and would only be more daunting if the mine were enlarged. She also wondered whether the expanded pit would affect nearby homes' water wells. *Testimony of Deanna Claus.*

31. Stewart Toshach is an environmental scientist who lives adjacent to Dodsen Canyon. He said the mine would affect his property. He argued that the purpose of the permit should be to mitigate environmental harms from past mining, not to allow new mining. Mr. Toshach said that the proposal would outlive the Applicant. He argued that the data in the record was insufficient to evaluate groundwater impacts to Dodsen Canyon. Groundwater impacts to Dodsen Canyon and other bluffs could jeopardize homes. Mr. Toshach said that building permits for other projects in the area force homeowners to

build 300 feet back from the slope and face other permitting hurdles due to the slopes' instability. Yet this mine, a far larger project, was being allowed to proceed. He said geotechnical drilling in many locations around the site was the only way to learn which direction the groundwater flows. *Testimony of Stewart Toshach.*

32. Ellen Bynum is the executive director for Friends of Skagit County. She said the mission of Friends of Skagit County is to appeal bad land use decisions. She said the County had failed to obtain sufficient information to evaluate the proposed expansion. There was insufficient information about groundwater flow, groundwater levels, hydrological mapping, identification of aquifers, and springs and seepage from the bluffs. Ms. Bynum suggested that the Applicant be required to submit a mining plan and furnish the missing information. She said the County should bring in consultants to reduce the risk if the County was not able to evaluate the risk itself. *Testimony of Ellen Bynum.*

Staff Recommendation

33. Mr. Cricchio testified that the County staff recommends that the Hearing Examiner approve the SUP request, with five new conditions. *Testimony of Kevin Cricchio; Exhibit 38, Addendum to Staff Report, page 4.*

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 R20210038, dated February 23, 2021. *Exhibit 26.*

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:

- 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.

Exhibit 26.

Conclusions Based on Findings

1. **The steep area to the west/northwest of the Mine requires the preparation of a Geologically Hazardous Area Site Assessment, and one was submitted by the Applicant.** The Hearing Examiner previously determined that a Geologically Hazardous Area Site Assessment was required in his order dated March 9, 2021. A Geologically Hazardous Area Site Assessment is warranted in light of the many homes that lie atop the coastal bluffs to the west and northwest of the proposed mine expansion, the known history of erosion and landslides atop those bluffs, and the disagreement among professional geologists about the safety of the proposed mine expansion with regards to its potential impacts to groundwater flow. *Findings 3; 6 – 33.*

2. **The Geologically Hazardous Area Site Assessment is consistent with SCC 14.24.400–.420 and the Hearing Examiner's discretion**. The Hearing Examiner exercises his discretion to conclude that the geologically hazardous area site assessment is compliant with the Board of County Commissioner's order on remand. The Geologically Hazardous Area Site Assessment prepared by Wood does not, strictly speaking, comply with SCC 14.24.420. That section requires specific elements to appear in an assessment, including:

    (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.

SCC 14.24.420(2).

Here, the Wood Assessment does not include an estimate of the coastal bluff retreat rate (criterion (e)), nor an estimate of the coastal bluff's slope stability over the life of structures placed atop the bluff (criterion (f)). The Hearing Examiner concludes, however, that such elements are not necessary in this case. The proposed mine expansion is not being built within 200 feet of a known or suspected risk, as contemplated in SCC 14.24.420(1), nor within "a distance from the base of a landslide hazard area equal to the vertical relief," as also contemplated in SCC 14.24.420(1). The existing mine is approximately 300 feet from the bluffs; the proposed expansion is approximately 800 feet. Thus, under SCC 14.24.420(1), a geologically hazardous site assessment would not normally be triggered in the first place. Instead, a geologically hazardous site assessment has been ordered out of an abundance of caution in light of the possibility of groundwater flow from the proposed mine expansion to the bluffs northwest of the site. Given that the trigger for the assessment falls outside the strict requirements of the code, the Hearing Examiner will exercise the discretion afforded him by Resolution R20210038 not to require strict adherence to the elements of an assessment. The Applicant's Geologically Hazardous Area Site Assessment, as will be discussed below, is adequate to the task required on remand: to assess the possibility that groundwater flow altered by the proposed mine expansion could affect the coastal bluffs northwest of the site. *Findings 1 – 33.*

3. **The preponderance of the evidence supports the conclusions of the Geologically Hazardous Areas Site Assessment**. The Geologically Hazardous Areas Site Assessment prepared by Wood concluded that the proposed mine expansion would not jeopardize the stability of the coastal bluffs to the northwest of the proposed mine expansion. Author Todd Wentworth was aware of the seeps or springs that emerge from

the coastal bluffs northwest of the mine site. He concluded these seeps or springs are from groundwater. He concluded, however, that groundwater from the proposed mine expansion will not affect the groundwater seeping from the coastal bluffs. That being the case, Mr. Wentworth concluded, in a section of his Assessment specifically devoted to the coastal bluffs, that the mine expansion would not affect the bluffs.

Mr. Wentworth's conclusion that groundwater from the mine expansion will not affect the northwestern coastal bluffs was predicated on his conclusion that groundwater beneath the mine flows north and northeast, not northwest. That conclusion, in turn, was based on the work of hydrologist Thomas Mullen. Mr. Mullen is the only person who has performed a physical investigation of groundwater flow at the mine site. He drilled three test wells in and around the mine pit. Based on those three test wells, as well as the topography of the site, he concluded that groundwater flows north and northeast.

The County's third-party reviewer, The Watershed Company, agreed with the methodology employed in the Wood Assessment by Mr. Wentworth, which in turn relied on the data generated by Mr. Mullen. Thus, the Hearing Examiner concludes that the Applicant made a *prima facie* showing that groundwater flows from the mine site will not increase the jeopardy of the northwestern bluffs—which, as the public testimony and the Geary Preserve Assessment showed, are already unstable and prone to landslides and erosion due to both natural conditions and the actions of homeowners developing their properties atop the bluffs, as well as drainage impacts from Rosario Road.

It is not the case that the Applicant's reviewers and the County's third-party reviewer overlooked the northwestern bluffs. On the contrary, in the testimonies of Mr. Wentworth and Mr. Mullen, and in the written reports of Mr. Wentworth and The Watershed Company, the northwestern bluffs are specifically discussed. It is true, as Mr. Loring noted, that one paragraph in The Watershed Company's January 18, 2023, Third-Party Review is devoted to bluffs to the southwest of the proposed mine. However, that same review also references Evergreen Island's concerns about bluffs to the northwest of the proposed mine, so it is not the case that The Watershed Company was confused about which bluffs were supposed to be the subject of the Geologically Hazardous Areas Site Assessment.

Dan McShane argued, in his written reviews and in his oral testimony, that it is possible that groundwater will flow to the northwest if the proposed mine expansion is excavated. His argument is predicated on the belief that the reason groundwater currently flows to the north/northeast is because of a layer of glacial till. If that layer is removed during mining, then it is possible groundwater will no longer flow north or northeast. It may flow somewhere else, including northwest. If it does flow northwest, it may contribute to groundwater seeping out from the coastal bluffs, which would, in turn, contribute to their

conditions of approval for the proposed mine expansion. In addition, County staff recommends that the Applicant reimburse the County for the costs the County has incurred in obtaining the Third-Party Review and providing public notice of the remand hearing. The Hearing Examiner agrees that these are reasonable conditions. *Findings 6 and 33.*

DECISION

Based on the preceding findings and conclusions, the Hearing Examiner orders that the original decision, dated November 30, 2020, be **MODIFIED** to include the following new conditions, to supplement the conditions set forth in the original decision:

1. Development shall comply with all recommendations and requirements of the Geologically Hazardous Areas Site Assessment dated August 11, 2022, prepared by Wood Environment and Infrastructure Solutions, Inc.

2. Development shall comply with all recommendations and requirements of the Third-Party Review performed by the Watershed Company, dated January 18, 2023, including the attachment thereto, dated November 22, 2022.

3. All applicable permits (local, state, and federal) must be secured before any mining excavation activities begin onsite. Copies of permits shall be provided to the Skagit County Planning & Development Services Department.

4. The Applicant shall be responsible for reimbursement to Skagit County Planning & Development Services Department for the full cost of mailings and newspaper publication associated with the Notice of Development Application, Notice of Issuance of SEPA MDNS, Notice of Hearing, and Notice of Decision. Payment shall be made prior to any work beginning onsite and grading permit application submittal and/or issuance.

5. The Applicant shall be responsible for reimbursement to Skagit County Planning & Development Services Department for the full cost of Third-Party Review of the Geologically Hazardous Areas Site Assessment. Payment shall be made prior to any work beginning onsite and grading permit application submittal and/or issuance.

DECIDED this 13th day of July 2023.

Alex Sidles

ALEX SIDLES
Hearing Examiner

instability. Mr. McShane argues that this chain of possibilities demands further investigation, including test wells dug off-site of the mine to the northwest.

The Hearing Examiner is not persuaded by Mr. McShane's attack on the work of Mr. Wentworth, Mr. Mullen, and The Watershed Company. Mr. McShane has not demonstrated that groundwater will flow to the northwest if the proposed mine expansion is excavated. He supplied no groundwater flow analysis or modeling of his own to show a northwestern flow under various configurations of the mine. His concern about northwestern flow is speculative. That speculation has now been considered in the Wood Assessment and The Watershed Company's review, and those authors did not see any reason to believe northwestern flow would occur.

It is true that the Applicant and third-party reviewers themselves have not conducted groundwater flow analysis or modeling under various configurations of the mine. Part of Mr. McShane's attack on their work is that they should have performed such analysis, including the digging of test wells to the northwest, on the properties not owned or controlled by the Applicant. The Hearing Examiner agrees that such investigations would have led to a stronger, more persuasive Geologically Hazardous Areas Site Assessment, but, in the absence of evidence showing a substantial likelihood that northwestern flow will occur, it is not reasonable to require the Applicant or the County to conduct offsite, physical investigations to rebut speculation that it might occur. A speculative attack on the Geologically Hazardous Areas Site Assessment is not enough to outweigh the authors' and reviewers' conclusions, which were based on on-site wells as well as topographical review.

The order on remand required further assessment of the dangers to the northwestern bluffs. That assessment has now occurred. Not every assessment requires new test wells or modeling. Many assessments (including Mr. McShane's own reviews) are based on a simple site visit and a review of the existing data. Although more testing and more data would always be welcome, the Hearing Examiner cannot conclude that they would be required here. The existing evidence shows groundwater flow from the mine site that does not jeopardize the northwestern cliffs, and none of the evidence put forward in rebuttal shows otherwise. The Hearing Examine concludes that the Geologically Hazardous Areas Site Assessment, and the evidence in the record, is sufficient to satisfy the order on remand. *Findings 1 – 33,*

4. **Additional conditions are necessary to mitigate risks identified during the supplemental proceedings**. County staff recommended the Hearing Examiner retain the conditions of approval set forth in the original decision and add five new conditions relating to the geotechnical work that has been performed on remand. County staff recommend that recommendations set forth in the Geologically Hazardous Areas Site Assessment, and The Watershed Company's Third-Party Review, be added to the

conditions of approval for the proposed mine expansion. In addition, County staff recommends that the Applicant reimburse the County for the costs the County has incurred in obtaining the Third-Party Review and providing public notice of the remand hearing. The Hearing Examiner agrees that these are reasonable conditions. *Findings 6 and 33.*

DECISION

Based on the preceding findings and conclusions, the Hearing Examiner orders that the original decision, dated November 30, 2020, be **MODIFIED** to include the following new conditions, to supplement the conditions set forth in the original decision:

1. Development shall comply with all recommendations and requirements of the Geologically Hazardous Areas Site Assessment dated August 11, 2022, prepared by Wood Environment and Infrastructure Solutions, Inc.

2. Development shall comply with all recommendations and requirements of the Third-Party Review performed by the Watershed Company, dated January 18, 2023, including the attachment thereto, dated November 22, 2022.

3. All applicable permits (local, state, and federal) must be secured before any mining excavation activities begin onsite. Copies of permits shall be provided to the Skagit County Planning & Development Services Department.

4. The Applicant shall be responsible for reimbursement to Skagit County Planning & Development Services Department for the full cost of mailings and newspaper publication associated with the Notice of Development Application, Notice of Issuance of SEPA MDNS, Notice of Hearing, and Notice of Decision. Payment shall be made prior to any work beginning onsite and grading permit application submittal and/or issuance.

5. The Applicant shall be responsible for reimbursement to Skagit County Planning & Development Services Department for the full cost of Third-Party Review of the Geologically Hazardous Areas Site Assessment. Payment shall be made prior to any work beginning onsite and grading permit application submittal and/or issuance.

DECIDED this 13th day of July 2023.

Alex Sidles

ALEX SIDLES
Hearing Examiner

Appeal or Request for Reconsideration

Planning & Development Services · 1800 Continental Place · Mount Vernon WA 98273
voice 360-416-1320 · inspections 360-416-1330 · www.skagitcounty.net/planning

File #: PL23-0380
RECEIVED
JUL 27 2023
SKAGIT COUNTY PDS
Received by: NS

Appeal ☐

What are you appealing?

- ☐ Appeal of an Administrative Interpretation/Decision/Action to the Hearing Examiner
- ☐ Appeal of an Administrative Order to Abate (code enforcement order) to the Hearing Examiner
- ☐ Appeal of Impact Fees to the Hearing Examiner (impact fees must be paid) (SCC 14.30.070)
- ☑ Appeal of Hearing Examiner Decision/Action to the Board of County Commissioners
- ☐ Request for Reconsideration of a Hearing Examiner Decision (SCC 14.06.180)

File # of Appealed Decision or Permit	PL16-0556	**Appeal Fee**	$	*PDS will calculate*
Date of Appealed Decision or Permit	July 13, 2023	**Publication Fee**	$	*PDS will calculate*

PDS staff: do not accept appeal form without full payment of fees

Appellant

Standing to appeal	☐ Permit applicant ☐ Party of Record ☐ Party subject to code enforcement order ■ Other				
Name	Sunset Lane Association				
Address	13136 Sunset Lane				
City, State	Anacortes, WA	**Zip**	98221	**Phone**	360-293-8883
Email	lraedobbs@outlook.com	**Signature**	Linda Dobbs		

Attorney or Representative ☐ None

Name	Sunset Lane Association Board: Frank Parker; Mac Madenwald, Linc				
Address	13136 Sunset Lane				
City, State	Anacortes, WA	**Zip**	98221	**Phone**	360-293-8883
Email	Lraedobbs@outlook.com				

Attachments

☑ For any of the **appeals** listed above, please attach a concise statement with numbered responses to the following questions.

1. What is your interest in this decision?
2. How are you aggrieved by the decision you are appealing?
3. What are the specific reasons you believe the decision is wrong?
   e.g. erroneous procedures, error in law, error in judgment, discovery of new evidence
4. Describe any new evidence.
5. List relevant sections of Skagit County Code.
6. Describe your desired outcome or changes to the decision.

☐ For a request for **reconsideration** of a Hearing Examiner decision, attach a statement identifying the specific errors alleged.

PL23-0380

NS

Sunset Lane Association Appeal for PL16-0556 – Answers to questions

1. Homeowners adjacent to subject property of the gravel pit.
2. The geological hazard assessment required by the commissioners in accordance with SCC14.24.400-.420 was not submitted.
3. Previous geological and hydrological studies failed to determine groundwater flow to the west/northwest of the site. Additionally, previous studies were found to be inadequate by the commissioners, yet no additional studies were conducted.
4. New evidence was required by the commissioners, and was not conducted nor submitted. We do not have additional evidence at this time, as the applicable studies need to be completed.
5. 14-06.110
6. We hereby request that the Skagit County Hearing Examiner's decision of approval be rescinded.

EXHIBIT #46

BOCC REMAND ORDER, RESOLUTION #R20230197, DATED OCTOBER 6, 2023

RESOLUTION #

A Resolution Pertaining to the Closed Record Appeal Before the Skagit County Board of Commissioners Of Special Use Permit PL16-0556

WHEREAS, Evergreen Islands ("**Appellant**") timely filed this closed record appeal to the Board of Skagit County Commissioners (hereinafter, the "**Board**") pursuant to Skagit County Code ("**SCC**") 14.06, challenging the Skagit County Hearing Examiner's Decision approving Special Use Permit PL16-0556 (the "**Permit**"); and

WHEREAS, the Permit authorizes the expansion of an existing 17.78 acre gravel mine located on the west side of Fidalgo Island to an ultimate size of 53.5 acres (hereinafter, the "**Mine**"); and

WHEREAS, County Planning staff did not require a Geologically Hazardous Site Assessment associated with the steep coastal area located to the west/northwest of the Mine, grounded principally on an inference derived from a hydrogeologic site assessment submitted by the Applicant, based on observation of existing wells located on the easterly side of the proposed project, to the effect that groundwater at the Mine flows to the north/northeast, toward Lake Erie. The hydrogeologic site assessment acknowledged that some quantity of groundwater flows to the north/northwest:

> The groundwater flow direction in the Mine area is interpreted to be generally from south to north and northeast toward Lake Erie. A smaller groundwater flow component appears to be to the north/northwest.
> ...
> Because the Mine will not be generating any additional water and that all stormwater will be contained within the Mine boundary, groundwater flow beneath the proposed mine expansion should have no effect on nearby slope stability.

Maul Foster Alongi Hydrogeologic Site Assessment Report for Lake Erie Pit Expansion, dated September 28, 2016 ("**Maul Foster Report**"), at page 3,5 (Hearing Examiner ["**HE**"] Record at 00208, 00210); and

WHEREAS, the Appellant timely raised concerns before the Hearing Examiner regarding potential landslide risk arising from the potential for increased groundwater flow to the west/northwest, in part due to the Mine's planned expansion and anticipated removal of soil and vegetation, which, the Appellant contends, may alter groundwater behavior in the vicinity of the Mine; an

WHEREAS, the Appellant furnished evidence to the Hearing Examiner regarding the presence of springs on the coastal bluff to the northwest of the Mine at an elevation downgradient of the inferred groundwater level, and the testimony of a geologist who opined that the expanded Mine

operations, including potential removal of a clay layer, will create an increased landslide risk, arguing that the coastal bluff area to the west/northwest of the Mine is a geologically hazardous area pursuant to SCC 14.24.410, thus requiring a Geologically Hazardous Site Assessment; and

WHEREAS, on February 3, 2021, the Board remanded this matter to the Hearing Examiner for further consideration as to whether the steep area to the north/northwest of the Mine requires preparation of a Geologically Hazardous Site Assessment per SCC 14.24.400-.420 ("**GHSA**"), as well as a directive to prepare a GHSA is so required; further proceedings as necessary to take evidence; and any additional permit conditions arising from the foregoing; and

WHEREAS, the Hearing Examiner found that a GSHA was required, and directed the Applicant to prepare a GSHA; and

WHEREAS, on August 11, 2022 a GHSA was prepared for the Applicant by Wood Environment and Infrastructure Solutions (the "**Wood GSHA Report**"). The Wood GHSA Report affirms the Maul Foster Report's conclusion that potential instability to the north/northwest of the Mine expansion poses no risk, reasoning that (1) Rosario Road "was designed and is maintained by Skagit County, and therefore is considered stable"; and (2) "because the proposed expansion plans will not change the regional groundwater conditions," relying on the Maul Foster Report for the latter conclusion. Wood GHSA Report, 5.0 Conclusions and Recommendations, page 6 (HE Record 00756); and

WHEREAS, Skagit County Planning and Development Services ("**SCPDS**") thereafter commissioned a third-party review, which concluded that the Wood GSHA report used appropriate methodologies. *See*, Watershed Company Report dated January 18, 2023 (HE Record 00791-00794). Although seemingly acknowledging that it is a potential issue, the Watershed Company Report did not appear to conduct any specific analysis regarding the unstable area to the north/northwest of the Mine; and

WHEREAS, on June 28, 2023, the Hearing Examiner held an open record hearing on remand to consider whether the foregoing actions and analyses met the requirements of Skagit County Code and the Board's February 3, 2021 remand order; and

WHEREAS, after reviewing the materials, the Hearing Examiner noted the following:

> The Geologically Hazardous Area Site Assessment does not, strictly speaking, comply with SCC 14.24.420.
> ...
> Here, the [Wood GSHA Report] does not include an estimate of the coastal bluff retreat rate (criterion (e)), nor an estimate of the coastal bluff's slope stability over the life of the structures places on top of the bluff (criterion (f)). The proposed mine expansion is not being built within 200 feet of a known or a suspected risk, as contemplated in SCC 14.24.420(1), nor within "a distance from the base of a landslide hazard area equal to the vertical relief," as also contemplated in SCC

> 14.24.420(1). The existing mine is approximately 300 feet from the bluffs; the proposed expansion is approximately 800 feet.
> ....
> Given that the trigger for the assessment falls outside the strict requirements of the code, the Hearing Examiner will exercise the discretion afforded him by Resolution R20210038 not to require strict adherence to the elements of an assessment.

Hearing Examiner Conclusion 2, at page 17.

WHEREAS, on this basis, the Hearing Examiner concluded that Skagit County Code and the intent of the Board's February 3, 2021 remand order had been fulfilled, denying the appeal and approving the Permit; and

WHEREAS, pursuant to SCC 14.24.420(1), a GHSA is required in areas where a "proposed development activity is located within 200 feet of an area of known or suspected risk," where a "geologic condition may pose a risk to life and property, or other critical areas on and off the project area," and

WHEREAS, the term "known and suspected risk" is defined by SCC 14.24.410(1) and (2), and includes, per SCC 14.24.410(2)(a), those areas designated as "(U) Unstable" by the Department of Ecology Coastal Zone Atlas, Washington, Volume Two, Skagit County (1978); and

WHEREAS, the area immediately adjacent to the Mine footprint, to the northwest, is designated as "Unstable" by the Department of Ecology's Coastal Atlas, including Rosario Road, and for this reason the Board concurs with the Hearing Examiner's conclusion that a GSHA is required; and

WHEREAS, under the circumstances, having found that a GSHA is required, it is beyond the discretion of the Hearing Examiner to modify code requirements and conclude the GSHA need only be performed in part; and

WHEREAS, the Board is furthermore unpersuaded by the Wood Report's apparent conclusion that Rosario Road forms an effective or regulatory barrier between the Mine operation and the designated Unstable area immediately adjacent to the Mine; and

WHEREAS, pursuant to SCC 14.06.170(10), the Board may take one of the following actions:

(1) Deny the appeal and affirm the decision of the Hearing Examiner;

(2) Find the Hearing Examiner's decision clearly erroneous, adopting its own findings, conclusions and decision based on the record before it; or

(3) Remand the matter for further consideration by the Hearing Examiner.

NOW, THEREFORE, BE IT RESOLVED:

1. Pursuant to SCC 14.60.170(10)(3), this matter is hereby REMANDED to the Skagit County Hearing Examiner for preparation of a GSHA 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.

2. In issuing this remand order, it is the Board's intention that additional physical investigation and analysis will be performed to assess the north/northwest 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

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

WITNESS OUR HANDS AND THE OFFICIAL SEAL OF OUR OFFICE this 6th day of October 2023.

BOARD OF COUNTY COMMISSIONERS
SKAGIT COUNTY, WASHINGTON

Ron Wesen , Chair

Lisa Janicki, Commissioner

Peter Browning, Commissioner

SKAGIT COUNTY COMMISSIONERS SEAL COURT STATE OF WASHINGTON

ATTEST:

Clerk of the Board

APPROVED AS TO FORM:

Will Honea, Senior Deputy
Skagit County Prosecuting Attorney

EXHIBIT #47

HEARING EXAMINER REMAND ORDER TO PDS, DATED: OCTOBER 6, 2023

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	)	
	)	
	)	SECOND REFERRAL TO PLANNING
For a Special Use Permit	)	AND DEVELOPMENT SERVICES

On the appeal of Evergreen Islands, the Skagit County Commissioners on October 6, 2023, remanded this matter to the Skagit County Hearing Examiner for a second time, with the following instructions:

1. Pursuant to SCC 14. 60. 170(10)(3), 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.

2. In issuing this remand order, it is the Board's intention that additional physical investigation and analysis will be performed to assess the north/northwest 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.

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

After considering of the above directions, the Hearing Examiner has determined that the appropriate course now is to refer this matter to Planning and Development Services (PDS), with instructions to direct the Applicant to cause another Geologically Hazardous Site Assessment to be prepared and submitted to PDS, in accordance with the Board of County Commissioners' October 6 instructions.

On receipt of such assessment, PDS shall review it and provide an Amended Staff Report to the Hearing Examiner containing PDS's analysis and recommendations in light of the assessment.

Thereafter, the Hearing Examiner will schedule and hold a supplementary public hearing on this matter, limited to comment on the Geologically Hazardous Site Assessment. Following this

supplementary hearing, based on the record made, the Hearing Examiner will issue a decision imposing such additional conditions, if any, as may be necessary to mitigate risks that have been identified.

SO ORDERED this 6th day of October, 2023.

ALEX SIDLES
Hearing Examiner

EXHIBIT #48

SKAGIT COUNTY PDS LETTER TO APPLICANT, DATED: OCTOBER 10, 2023

Skagit County
Planning & Development Services

October 10, 2023

Bill Wooding
13540 Rosario Road
Anacortes, Washington 98221

RE: HEARINGS EXAMINER'S 2ND REFERRAL OF PL16-0556 TO SKAGIT COUNTY'S PLANNING & DEVELOPMENT SERVICES DEPARTMENT

Mr. Wooding:

Please find attached a copy of the remand from the Board of County Commissioners as well as a copy of the Order that the Hearings Examiner sent deferring the next steps to Skagit County Planning and Development Services (PDS).

According to the directions of the Hearing Examiner, the applicant shall hire a qualified professional to prepare a Geologically Hazardous Site Assessment in accordance with the Board of County Commissioners' October 6 instructions.

The Geologically Hazardous Area Site Assessment shall be prepared consistent with the requirements of Skagit County Code 14.24.400-.420, including but not limited to SCC 14.24.420(e) and (f),

The Geologically Hazardous Area Site Assessment shall have a **physical investigation and analysis assessing the north/northwest 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.

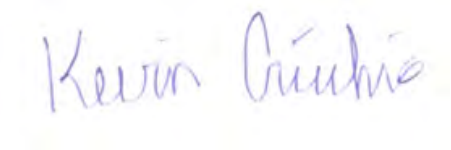
The requested information needs to be received by our department **within 120 days of the date of this letter** as required by Skagit County Code 14.06.105. Failure to do so will result in the denial of your application for Special Use Permit.

Once we receive the requested information, third party review performed by a consultant on behalf of PDS will likely occur. Please note, all costs of third party review will be passed on to the applicant to pay in full.

Once Skagit County's third party review consultant has reviewed your Geological Hazardous Site Assessment a new Notice of Public Hearing will be issued and a new date set for a public hearing before the Hearing Examiner on this matter.

If you have any questions, please feel to contact me at (360) 416-1423 or by email at kcricchio@co.skagit.wa.us. . Thank you.

Sincerely,



Kevin Cricchio, AICP, ISA
Senior Planner

Enclosures: Board of County Commissioners, 10/6/2023 Remand Decision
Hearing Examiner's 10/6/2023 2nd Referral to PDS

EXHIBIT #49

90-DAY EXTENSION OF TIME TO SUBMIT ADDITIONAL INFORMATION REQUESTED, DATED: JANUARY 4, 2024

Planning & Development Services

1800 Continental Place ▪ Mount Vernon, Washington 98273
office 360-416-1320 ▪ pds@co.skagit.wa.us ▪ www.skagitcounty.net/planning

January 4, 2024

Bill Wooding
13540 Rosario Road
Anacortes, Washington 98221

RE: LAKE ERIE SPECIAL USE PERMIT APPLICATION, PL16-0556; REQUEST FOR ADDITIONAL INFORMATION -EXTENSION OF TIME

Mr. Wooding:

Please note Skagit County requested additional information from you following a remand to Skagit County PDS from the Hearing Examiner/Board of County Commissioners. The specific request for additional information (attached) was put in writing to you in a letter dated October 10, 2023. Please note, that per SCC 14.16.105(1), an applicant has 120-days (**4:30 PM on February 10, 2024**) to submit this required information to us, or the subject Special Use Permit application may be denied.

Today, we received a letter from your consultant Sheryl Albritton formally requesting an extension to this 120-day deadline. After reviewing this request, a 90-day extension to the deadline is hereby granted. The requested additional information is now due to Skagit County Planning and Development Services Department no later than **4:30 PM on May 10, 2024**.

If you have any questions, please let me know. I can be reached by phone at (360) 416-1423 or via email at kcricchio@co.skagit.wa.us. Thank you.

Sincerely,

Kevin Cricchio, AICP, ISA,
Senior Planner

Attachments: January 4, 2024, Letter from Sheryl Albritton
October 10, 2023, PDS Letter to Bill Wooding

San Juan Islands Real Estate LLC
Land Use . Permitting . Real Estate

January 4, 2024

Kevin Crircchio, AICP, ISA
Senior Planner
Skagit County Planning and Development Services
1300 Continental Place
Mount Vernon, WA 98273

RE: Lake Erie Pit PL16-0556
120 Day deadline for additional information related to October 6, 2023 Order

Dear Mr. Crircchio:

Please accept this letter as a formal request for additional time in accordance with the exception contained in SCC 14.06.105(1)(a).

The request for additional information included drilling and testing of new wells. The drilling of the wells was challenged due to the driller's schedule. The driller did make accommodations by pulling off another job, however, this work fell in and along the year-end holidays.

Wells have been drilled, samples collected, and submitted for analysis. We are waiting for those results so we may complete the required reports and request an additional 30 days to ensure there is time to prepare accordingly.

Thank you for your consideration.

Sheryl Albritton
Principal Code Consultant &
Representative for Bill Wooding, Owner

cc: Bill Wooding
Thomas Mullen

Skagit County
Planning & Development Services

October 10, 2023

Bill Wooding
13540 Rosario Road
Anacortes, Washington 98221

RE: HEARINGS EXAMINER'S 2ND REFERRAL OF PL16-0556 TO SKAGIT COUNTY'S PLANNING & DEVELOPMENT SERVICES DEPARTMENT

Mr. Wooding:

Please find attached a copy of the remand from the Board of County Commissioners as well as a copy of the Order that the Hearings Examiner sent deferring the next steps to Skagit County Planning and Development Services (PDS).

According to the directions of the Hearing Examiner, the applicant shall hire a qualified professional to prepare a Geologically Hazardous Site Assessment in accordance with the Board of County Commissioners' October 6 instructions.

The Geologically Hazardous Area Site Assessment shall be prepared consistent with the requirements of Skagit County Code 14.24.400-.420, including but not limited to SCC 14.24.420(e) and (f),

The Geologically Hazardous Area Site Assessment shall have a **physical investigation and analysis assessing the north/northwest 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 requested information needs to be received by our department **within 120 days of the date of this letter** as required by Skagit County Code 14.06.105. Failure to do so will result in the denial of your application for Special Use Permit.

Once we receive the requested information, third party review performed by a consultant on behalf of PDS will likely occur. Please note, all costs of third party review will be passed on to the applicant to pay in full.

Once Skagit County's third party review consultant has reviewed your Geological Hazardous Site Assessment a new Notice of Public Hearing will be issued and a new date set for a public hearing before the Hearing Examiner on this matter.

If you have any questions, please feel to contact me at (360) 416-1423 or by email at kcricchio@co.skagit.wa.us. . Thank you.

Sincerely,

Kevin Cricchio, AICP, ISA
Senior Planner

Enclosures: Board of County Commissioners, 10/6/2023 Remand Decision
Hearing Examiner's 10/6/2023 2nd Referral to PDS

EXHIBIT #50

NORTHWEST GROUNDWATER CONSULTANTS, GEOHAZARD SITE ASSESSMENT, DATED: FEBRUARY 29, 2024

Northwest Groundwater Consultants, LLC

February 29, 2024 Project No. 01127-02

Mr. William Wooding
Lake Erie Pit 1 LLC
13540 Rosario Road
Anacortes, Washington 98221

Subject: Lake Erie Pit Groundwater Evaluation

Dear Bill:

Northwest Groundwater Consultants, LLC (NWGC) has prepared this groundwater evaluation to support a special use permit application for the expansion of the Lake Erie Pit mine located at 13540 Rosario Road near Anacortes, Washington (the Mine or Site) (Attachment A, Figure 1). The Site is located within Section 11, Township 34 North, Range 1 East in Skagit County, Washington. The Mine currently operates on the following tax parcels; P19108, P19162, and P19165 under Skagit County Conditional Use Permit PL16-0056, and its owner and operator, Pit 1, LLC (Pit 1), wishes to expand operations to include the following tax parcels; P19161, P19164, P19158, P90028, and P19155 (collectively, "the Property"). The Mine and Property are owned by Pit 1. The Mine, as discussed in this report, comprises the existing permitted parcels and the proposed expansion parcels.

The Skagit County Planning and Development Services (SCPDS) requires a hydrogeologic assessment of the Mine to be conducted as part of the mining special use permit application and in accordance with Skagit County Code (SCC) 14.16.440(8)(b). This groundwater evaluation supplements the hydrogeologic assessment prepared September 26, 2016 (MFA, 2016). Excerpts from the hydrogeologic assessment are included in this report. Further, this groundwater evaluation was prepared in response to the request of the Skagit County Board of Commissioners.

BACKGROUND

Pit 1 is applying for a mining special use permit from Skagit County for the development of the following tax parcels as a surface mine for aggregate resources: P19161, P19164, P19158, P90028, and P19155. The currently permitted and expansion parcels are zoned as Rural Resource-Natural Resource Lands (RRc-NRL) (Attachment A, Figure 2).

The Mine will be dry mined using standard surface mining equipment (i.e., front end loaders and excavators). The mined aggregate will be loaded into trucks and transported off the Property. The maximum floor depth of the Mine is proposed to be no lower than 250 feet

mean sea level (msl) and will not go below 10 feet above the seasonal high groundwater table beneath the Property. Storm water will be directed to the east portion of the Site by means of maintaining a positive grade.

SITE AND VICINITY CONDITIONS

The Mine is located in an upland area on Fidalgo Island approximately two miles south-southeast of Anacortes, Washington. The topography of the Mine slopes downward to the northeast toward Lake Erie and ranges in elevation from approximately 240 feet msl along the northeast boundary of the proposed expansion area to approximately 340 feet msl in the south portion of the proposed expansion area. The Mine is accessed from Rosario Road; the entrance is approximately 0.13 mile east of Marine Drive.

Mean annual precipitation at the Site is approximately 28.6 inches per year based on the 30-year period from 1981 to 2010 (WRCC, 2024). During the groundwater investigation presented in this letter report, an “atmospheric river” event brought large amounts of precipitation to the region. Precipitation during the months of December 2023 and January 2024 measured approximately 4.52 and 4.32 inches (CoCoRaHS, 2024), respectively.

Surface Soils

Soils in Skagit county is mapped by the Natural Resource Conservation Service (NRCS) in the 1980s (NRCS, 1989). Site soils are mapped as predominantly Catla gravelly fine sandy loam, Keystone loamy sand, and Laconner very gravelly loamy sand (Attachment A, Figure 3). Mapped soils at the Site have no frequency of flooding or ponding (NRCS, 1989).

The Catla gravelly fine sandy loam is characterized as being moderately well drained, a very low to moderately low capacity to transmit water, and very low water storage. These soils are derived from glacial drift (i.e., till) and occupy the unmined areas of the central portion (current permitted parcels) and east portion (expansion parcels) of the Site.

The Keystone loamy sand is characterized as excessively drained, high to very high capacity to transmit water, and low water storage. The Keystone loamy sand is derived from glacial outwash and occupies the unmined areas of the west portion (expansion parcels) of the Site.

The Laconner very gravelly loamy sand is characterized as being moderately well drained, very low to moderately low capacity to transmit water, and very low water storage. The Laconner gravelly loamy sand occupies the unmined areas of the north portion (current permitted parcel) of the Site.

Geology

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). The geology of the Site consists predominantly of Fraser–age continental glacial till (Qgt) (unmined areas of the east and central portions of the Site) and Fraser-age continental glacial outwash (Qgas and Qgos) (west portion of the Site). These unconsolidated deposits are part of the Vashon Stade. The Qgt is the predominant geologic unit present at the ground surface in the unmined areas of the east and central portions of the Site (Attachment A, Figure 4). The Qgas is exposed at the ground surface in the northwest portion of the Site and the Qgos is exposed at the ground surface in the southwest portion of the Site. These deposits are typically comprised of boulders, cobbles, pebbles, sand, silt, and clay in a poorly sorted mixture. Well logs in the vicinity of the Site indicate these deposits can exceed 300 feet thick.

Jurassic-age Fidalgo ophiolite outcrops (Ji[f]) are present in the west portion of the Site (Attachment A, Figure 4). This formation extends to the west of the Site and comprises the coastal bluff west of Rosario Road. Based on nearby outcrops of the Fidalgo ophiolite to the north and east of the Site, it is inferred that this formation underlies the unconsolidated sediments at the Site. This formation would also limit the extent of mining to the west in the northwest portion of Parcel P19158.

PAST INVESTIGATIONS

Additional investigations subsequent to the Hydrogeologic Assessment (MFA, 2016) were conducted in support of the Skagit County permitting process. Reports of these investigations are summarized below.

Observation Well (East Well) Installation

An observation well (Washington State Department of Ecology [Ecology] Well ID BJF-103) was drilled in the south portion of the Site (MFA, 2017). A licensed geologist observed and

documented subsurface conditions and installation and construction details, and prepared the geologic log (Attachment B)[1].

The purpose of the well was to determine if a perched water-bearing unit existed that might be hydraulically connected to Devil's Elbow lake. The well was completed to a total depth of 277 feet below ground surface (ft bgs). Drilling encountered glacial till in the upper 35 feet and glacial outwash deposits below. The glacial till is consistent with the Catla sandy loam described above.

No perched groundwater was encountered. The static water level (SWL) measured at the time of drilling was approximately 263 ft bgs (groundwater elevation 183 feet above mean sea level [amsl]). Another SWL of 255.4 ft bgs was measured four days after completion of the well. This SWL is equivalent to a groundwater elevation of 190.2 feet amsl. Drilling and installation of the observation well determined that groundwater underlying the Site is in an unconfined aquifer approximately 190 feet amsl elevation. This elevation is approximately 60 feet below the proposed mine floor elevation prior to reclamation.

Lake Erie Pit Hydrologic Analysis

A hydrologic analysis was conducted to estimate the peak discharge for the 25-year, 24-hour storm event within the Lake Erie Pit permit boundary (NWGC, 2019a). Precipitation depth and intensity for the 25-year, 24-hour storm event was estimated to be 2.4 inches and 0.10 inches per hour (in/hr), respectively. Peak flow rate expected from the 25-year, 24-hour event was estimated using the Rational Method. A runoff coefficient (C) of 0.30 based on unimproved areas was selected. Based on the hydrologic data and calculated areas, the estimated peak discharges for the 25-year, 24-hour event is approximately 1.52 cubic feet per second (cfs) which is equivalent to 683 gallons per minute (gpm). Stormwater will conveyed to the east portion of the Site.

Lake Erie Pit Well Reconnaissance

To address Skagit County concerns on the direction of groundwater flow as it may be relative to nearby slopes west of the Site, it was agreed upon with Mr. John Cooper, Skagit County Planning and Development Service to measure groundwater levels in three wells (NWGC, 2019b). Several wells were identified (three wells north of the Site and two wells

[1] Well drillers are required by Ecology to prepare and submit well logs. These well logs are typically not as detailed, and in many cases, less reliable than geologist-prepared logs.

east of the Site) and communicated to the Client so that the Client could contact the respective owners for permission to measure groundwater levels. Only one owner (Reisner well) provided permission. The other two wells included well BJF-103 (observation well on site) and the Wooding well located north of Rosario Road, both owned by the Client.

Groundwater levels in these three wells were measured on March 7, 2019. In addition, elevations at each well were established using a survey-grade GPS. Plotting of groundwater elevations determined that the groundwater flow direction beneath the Site was approximately North 9° East.

SCOPE OF WORK

The scope of work conducted in December 2023 and January 2024 included drilling and completion of two observation wells, collection of groundwater samples, and measuring groundwater levels in select wells located at and near the subject property. Groundwater levels were used to develop groundwater contours and determine the groundwater flow direction.

Well Drilling Observations and Findings

Lake Erie Pit contracted Aquatech Well Drilling and Pumps, Inc. (Aquatech) of Sedro-Woolley, Washington to drill and install two observation wells. A licensed geologist from Aspect Consulting (Aspect) (under contract to Lake Erie Pit) observed the drilling and documented subsurface conditions and well installation and construction details. Aspect also assisted NWGC in the preparation of figures and well logs presented in this report.

Well locations were selected to investigate groundwater conditions in the north and west portions of the Site. Final locations were determined based on access for the drill rig and support truck.

Aquatech drilled two observation wells during the period from December 5 to December 8, 2023. The wells were drilled using a GEFCO Speedstar 30K air rotary rig. During well construction, Aquatech advanced a 10-inch diameter steel casing from the ground surface to approximately 18 ft bgs and then advanced a 6-inch diameter steel casing to final depth. A bentonite seal was installed between the 10-inch and 6-inch casing before removing the 10-inch casing. The north well is assigned the ID MW-1 (Ecology Well Tag No. BPN970), and the south well is assigned the ID MW-2 (Ecology Well Tag No. BPN971). Well

coordinates and ground surface elevations[2], as measured with a Trimble R1 GNSS Receiver, are contained within the well logs (Attachment B).

MW-1

MW-1 is located in the north portion of the Site in Parcel P19108 approximately 90 feet south of Rosario Road. Ground surface elevation is approximately 278 feet. The well was drilled to a total depth of 110 feet. Gravel, sand, and silty sand were encountered during the drilling. Sand and gravel were the predominant materials from ground surface to 24 feet deep. From 24 to 91 ft bgs, well-graded sand was encountered. These materials were noted to be dry. From 91 to 96 ft bgs, wet, silty sand was present. And from 96 to 110 ft bgs, wet, well-graded sand was encountered. Groundwater was first encountered at 92 ft bgs. Subsequent static water level (SWL) measurements indicated that groundwater levels varied from 89 to 90 ft bgs.

MW-2

MW-2 is located in Parcel P19168 approximately 200 feet east of Rosario Road and 190 feet south of Parcel 19158. Parcel P19168 is owned by Pit 1 LLC but is outside the proposed expansion parcels. Ground surface elevation is approximately 332 feet. The well was drilled to a total depth of 169 feet. Sand and gravel were generally encountered from ground surface to 80 ft bgs (Attachment B). A poorly-graded sand layer was encountered from 80 to 92 ft bgs. Silty sand extended from 92 to 160 ft bgs and poorly-graded sand was present from 160 to 169 ft bgs. A perched water zone was present at 80 ft bgs and groundwater was encountered at 148 ft bgs. The material between the perched water and groundwater was observed to be dry. Subsequent SWLs indicated groundwater levels were approximately 140 ft bgs.

Water Quality Sampling

Water quality sampling consisted of collecting samples from three site wells, four private wells, and two springs. The three site wells included MW-1, MW-2, and the East Well (Well Tag No. BJF-103 drilled in September 2017). Private wells included wells located on properties owned by Devries, Calvert, Reisner and Wooding. Water samples from private wells were collected from outside faucets. The two springs included a spring located in the

[2] Ground surface elevations were measured with the Trimble R1 (sub-meter precision) and corrected using 3DEP LiDAR digital elevation model from the USGS.

slope area northwest of Lake Erie Pit, referred to as the North Spring, and the Dodson Canyon Spring. Table 1 below summarizes sample locations.

Table 1. Groundwater Sampling Locations

Sample Location	Sample Date	Lab Sample ID	Property Owners(s)	Latitude	Longitude
East Well	1/3/2024	S07	Wooding	48.4496	-122.6523
MW-1 (North well)	1/3/2024	S03	Wooding	48.4520	-122.6511
MW-2 (South well)	1/3/2024	S06	Wooding	48.4479	-122.6569
Wooding Shop Well (Faucet)	1/3/2024	S05	Wooding	48.4524	-122.6486
Calver Well (Faucet)	1/3/2024	S01	Calvert, Wilson & Lori	48.4494	-122.6471
Reisner Well (Faucet)	1/3/2024	S02	Reisner, Theodore & Barbara	48.4486	-122.6459
DeVries Well (Faucet)	1/3/2024	S04	DeVries, Case	48.4531	-122.6504
Spring NW of pit (Grab)	1/4/2024	S08	San Juan Preservation Trust	48.4531	-122.6547
Dodson Canyon Spring (Grab)	1/4/2024	S09	Del Mar Community Service	48.4480	-122.6585

Prior to the collection of groundwater samples from the observation wells, the wells were purged to eliminate stagnant water in the well casing and to reduce the turbidity to the point the samples will be representative of the dissolved contaminant concentrations. During

purging, water quality parameters were monitored including temperature, specific conductance, dissolved oxygen, pH, ORP, and turbidity using a YSI ProPlus water quality meter and a handheld turbidity meter. For MW-1 and MW-2, adequate purging was achieved when the pH and specific conductance of the groundwater had stabilized, and the turbidity had either stabilized or was below 10 NTUs. Parameter stabilization criteria followed the EPA groundwater sampling procedures. Stabilization criteria could not be achieved from the East well due to the low volume of water available in the casing. Approximately 20 gallons of water were removed from this well prior to sampling.

Collection of the water quality samples from spring sources and private water systems followed guidance available from the DOH, EPA, and Edge Analytical. Samples taken from faucets were flushed for approximately 5 minutes prior to sampling.

Samples were collected at each location in laboratory-prepared bottles. Water quality sampling included the following analyses:

- Major Cations (calcium, magnesium, potassium, sodium)
- Major Anions (bicarbonate, carbonate, chloride, sulfate)
- Alkalinity (as $CaCO_3$)
- Fluoride, iron, manganese, total dissolved solids
- Ammonia, nitrate, nitrite, phosphorus

Samples were analyzed by Edge Analytical, Inc., a Washington State-certified laboratory in Burlington, Washington. Attachment C presents the laboratory analytical reports.

Major Cation/Anion Results

To provide the means for comparing analyses with each other, or to emphasize differences and similarities, graphical procedures such as trilinear diagrams (Piper diagrams) and Stiff diagrams are used. Analytical results received from the laboratory are typically reported in milligrams per liter (mg/L). Concentrations of the cation and anion analytes are then converted to milliequivalents per liter (meq/L) to make direct comparisons between samples (Table 2).

Piper diagrams (Figure 1) provide the means to compare the water samples to each other on the same plot. Cation and anion concentrations (in meq/L) and expressed as a percentage of total ions, are plotted on the appropriate equilateral triangles (cations and anions) and on the diamond plot (total ions). Water quality samples collected from the East Well and the Wooding Well show distinct differences from the other sample locations in both cations and anions. Further, waters samples from the two springs show some differences

from the remaining wells in cations. A more detailed comparison of cation/anion concentrations is made through the use of Stiff diagrams.

General classification of water types is performed using Stiff diagrams (Figure 2). Concentrations (in meq/L) of the four major cations and the four major anions for each sample are plotted to the right and to the left, respectively of the zero concentration for each sample.

Analytical results indicate that the groundwater and spring samples can be generally classified as following water types (Figure 2):

- Calcium-bicarbonate: MW-1, MW-2, Wooding Well
- Sodium-bicarbonate: East Well
- Magnesium-bicarbonate: Devries Well, Calvert Well, Reisner Well, North Spring, Dodson Canyon Spring

A more detailed review of the stiff diagrams shows that cation/anion concentrations (in meq/L) are similar in MW-1 and MW-2. Groundwater in the East Well has much lower concentrations of magnesium, sulfate, calcium, bicarbonate, sodium and chloride than those of generally similar water types in the other two site wells, three private wells, and the two springs. Further review also shows that magnesium and calcium concentrations in the three private wells are more similar to each other and that there is a greater difference in magnesium and calcium concentrations in the two springs. Sodium concentrations in the two springs are also greater than those in the private wells.

General Water Quality

General water quality included the following analytes: alkalinity, fluoride iron, manganese, total dissolved solids, ammonia, nitrate, nitrite, and phosphorus. Analytical results (Table 2 and Figure 3) show the following:

- Alkalinity and total dissolved solids are similar in all water samples.
- The highest iron concentrations were detected in the East Well, North Spring, MW-2, and Dodson Canyon Spring.
- Fluoride concentrations are at or near their practical quantitation limit (PQL).
- Ammonia was detected in the two springs, MW-2, East Well, Wooding Well, and Calvert Well.
- Nitrate was detected in the two springs, MW-2 and to a much lesser concentration in the Wooding Well.

Groundwater Levels

Groundwater levels were measured in site and private wells on January 31, 2024. Spring elevations were recorded on January 4, 2024 during water quality sampling. Groundwater levels were measured in MW-1, MW-2, and the East Well using a Waterline Envirotech water level meter. Groundwater levels were measured in the private wells using a Global WL650 Sonic water level meter. Pumps installed in the private wells were not operating at the time the measurements were taken. The locations and elevations of each well were established using a Trimble R1 GNSS Receiver. Table 3 below presents measured groundwater and spring elevations.

Table 3. Groundwater/Spring Elevations

Well/Spring ID	Measuring Point Elevation (ft)	DTW (ft bMP)	Groundwater/Spring Elevation (ft)
East Well	448.42	256.95	191.5
MW-1 (North well)	281.86	90.50	191.4
MW-2 (South well)	334.59	139.70	194.9
Calvert Well	246.9	56.25	190.6
Reisner Well	226.7	38.66	188.0
De Vries Well	238.3	53.80	184.5
Wooding Well	241.5	53.24	188.3
North Spring			169.3
Dodson Canyon Spring			232.9

Notes:
ft = feet NAVD88
ft bMP = feet below measuring point
NA = Not applicable
Water levels measured on 1/31/2024

Geologic Cross Sections

Three cross sections were developed through the Site (Figures 4, 5, and 6). These cross sections present general lithology encountered in the wells, inferred water table, topography, and approximate limits of the proposed mining and subsequent reclamation surfaces. Geologic logs for MW-1, MW-2 and the East Well, prepared by licensed

geologists, are presented in Appendix B. Well logs for the private wells are also presented in Appendix B. No record of a well log was available for the Wooding Well.

Cross section A-A' shows that the elevation of the North Spring is approximately 22 feet lower than the groundwater elevation measured in MW-1. Although these differences in elevation suggest that the hydraulic gradient is towards the spring, analytical data discussed above indicates that there are distinct differences in water chemistry between the North Spring and that of the groundwater beneath the Site. As such, a hydrologic connection between groundwater beneath the Site and the North Spring may not exist.

As can be seen from the cross sections, the mining surface floor will extend no deeper than 250 feet elevation. The water table is generally 59 feet lower in elevation. Cross section B-B' shows that the elevation of the Dodson Canyon Spring is approximately 38 feet higher than the groundwater elevation measured in MW-2. The spring elevation is consistent with the elevation of perched groundwater that was encountered during the drilling of MW-2.

Groundwater Flow

Groundwater contours developed using the water levels measured on January 31 shows that most groundwater in the central and east portions of the Site generally flows to the northeast and smaller components flow to the north and northwest (Figure 7). Although groundwater contours appear to suggest that groundwater flow in the northwest is hydrologically connected to the North Spring, water quality results again suggest that there are distinct differences in water chemistry between the North Spring (and Dodson Canyon Spring) and that of the groundwater beneath the Site. These differences in the water quality do not substantiate that a hydrologic connection exists. Thus, groundwater contours were not extended beyond Rosario Road.

As previously discussed in the Geology section above, bedrock (Fidalgo ophiolite) is mapped in the northwest portion of Parcel P19158. Its presence at or near surface likely creates a no flow boundary in the northwest portion of Parcel P19158. Groundwater flow from the southwest portion of the Site likely is redirected to the central portion of the of the Site due to the presence of this bedrock. Because of the uncertainty to the extent of the bedrock in the subsurface, groundwater contours in this area may not reflect groundwater flow being redirected.

DISCUSSION

As discussed above, overlying glacial till occupies the unmined areas of the central and east portions of the Site. These soils have a relatively low capacity to transmit water (i.e., infiltration from precipitation). Upon the removal of these soils, the underlying glacial

outwash materials (e.g., sands and gravels), have a much higher capacity to transmit water. Comparatively, the glacial till soils are absent in the west portion of the Site.

Differences in the overlying soil types are perceived to have an effect on groundwater conditions to the extent that if overlying glacial till is removed, increased infiltration will occur into the groundwater and the groundwater flow will increase to the detriment of the unstable slope areas west of the Site. However, given the absence of the glacial till in the west portion of the Site and that during the drilling of MW-1 and MW-2, it was observed that much of the subsurface sands and gravels were dry until drilling reached the water table, the premise that there will be increased infiltration due to mining the very same sands and gravels is not substantiated. Even in MW-2, where a perched water was encountered at approximately 80 feet deep, the materials above and below the perched zone were observed to be dry. It should also be noted that during the drilling of MW-1 and MW-2, unseasonable amounts of precipitation was recorded for the region due to an “atmospheric river” event that was affecting the entire region and that groundwater levels measured in the two new wells did not significantly change.

Thus, the removal of the glacial till in the unmined areas of the central and east portions of the Site, where groundwater flow is generally to the north and northeast, are not expected to result in significant changes to groundwater flow given that the underlying glacial outwash materials are similar to those found in the west portion of the Site. Further, the removal of materials in the west portion of the Site also is not expected to affect the underlying groundwater flow as noted above.

SUMMARY AND CONCLUSIONS

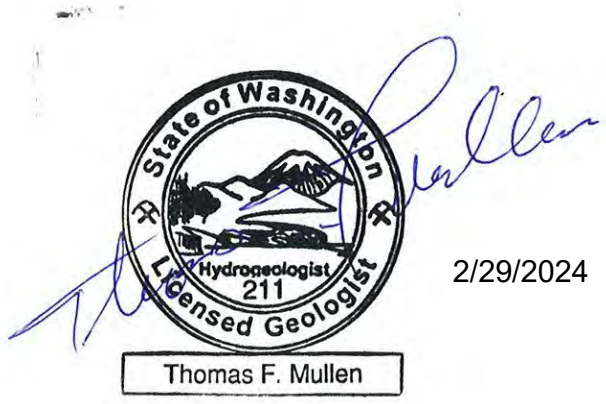
This groundwater evaluation was prepared to address the requirements for special use permit application under SCC 14.16.440(8)(b). The currently permitted and expansion parcels are zoned as Rural Resource-Natural Resource Lands (RRc-NRL). Glacial till occupies the east and central portions of the Site and is absent in the west portion of the Site. Coarser grained and more permeable glacial outwash underlies the glacial till and extends throughout the Site. Completion of two wells in the west portion of the Site, which occurred during an “atmospheric river” event, observed that much of the glacial outwash material is dry until the water table.

Water quality sampling identified distinct differences in groundwater beneath the Site and that of the springs. Differences in the water types indicate that the springs may not be hydrologically connected to Site groundwater. Groundwater elevations measured in Site and private wells show that most groundwater in the central and east portions of the Site generally flows to the northeast and smaller components flow to the north and northwest.

The premise that increased infiltration of precipitation into the groundwater due to the removal of the overlying glacial till in the central and east portions of the Site will increase groundwater flow is not substantiated due to 1) groundwater levels in the two new wells did not change significantly during the “atmospheric river” event, 2) exposed glacial outwash in the west portion of the Site is seen to be dry, and 3) groundwater flow in the central and east portions of the Site where the glacial till is present is generally to the northeast with a small component to the north. Removal of materials in the west portion of the Site also is not expected to affect underlying groundwater flow.

If you have any questions, or wish to discuss any items further, please do not hesitate to contact me at (208) 755-1094.

Sincerely,



2/29/2024

Thomas F. Mullen, LHG
Principal Hydrogeologist

Attachments:

- Limitations
- References
- Table
- Figures
- Attachment A – Hydrogeologic Assessment Figures
- Attachment B - Well Logs
- Attachment C – Laboratory Analytical Reports

LIMITATIONS

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by NWGC and the party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. No representation, warranty, or guarantee, express or implied, is intended or given. To the extent that NWGC relied upon any information prepared by other parties not under contract to NWGC, NWGC makes no representation as to the accuracy or completeness of such information. This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared for a particular purpose. Only the party for whom this report was originally prepared and/or other specifically named parties have the right to make use of and rely upon this report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk.

Results of any investigations or testing and any findings presented in this report apply solely to conditions existing at the time when NWGC investigative work was performed. It must be recognized that any such investigative or testing activities are inherently limited and do not represent a conclusive or complete characterization. Conditions in other parts of the project site may vary from those at the locations where data was collected. NWGC's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100 percent confidence in site investigation conclusions cannot reasonably be achieved.

NWGC, therefore, does not provide any guarantees, certifications, or warranties regarding any conclusions regarding subsurface conditions of any such property. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations, or standards.

Community Collaborative Rain, Hail and Snow Network (CoCoRaHS), 2024, Viewing Station: WA-SG-32: Anacortes 4.7 SSW: https://dex.cocorahs.org/stations/WA-SG-32/.

Maul, Foster & Alongi, Inc. (MFA), 2016, Hydrogeologic Site Assessment Report, Lake Erie Pit Expansion, Skagit County, Washington. Prepared for McLucas & Associates, Inc. September 26.

MFA, 2017, Observation Well Installation, Lake Erie Pit Expansion: Letter to McLucas & Associates, Inc. September 28.

Miller, R.D. and F. Pessel, Jr., 1986, Map showing unconsolidated deposits grouped on the basis of texture, Port Townsend 30' x 60' Quadrangle, Puget Sound region, Washington. USGS Miscellaneous Investigations Series, Map I-1198-D, scale 1:100,000.

NRCS, 1989, Soil survey of Skagit County Area, Washington. U.S. Department of Agriculture, Soil Conservation Service, September.

Northwest Groundwater Consultants, LLC (NWGC), 2019a, Lake Erie Pit Hydrologic Analysis: Letter to McLucas & Associates, Inc. January 16.

NWGC, 2019b, Lake Erie Pit Well Reconnaissance: Letter to McLucas & Associates, Inc. March 11.

U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), 1973, NOAA Atlas 2, Precipitation-Frequency Atlas of the Western United States, Volume 5, Idaho.

Western Regional Climate Center (WRCC), 2024, Anacortes, Washington (450176) 1981-2010 Monthly Climate Summary: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?wa0176

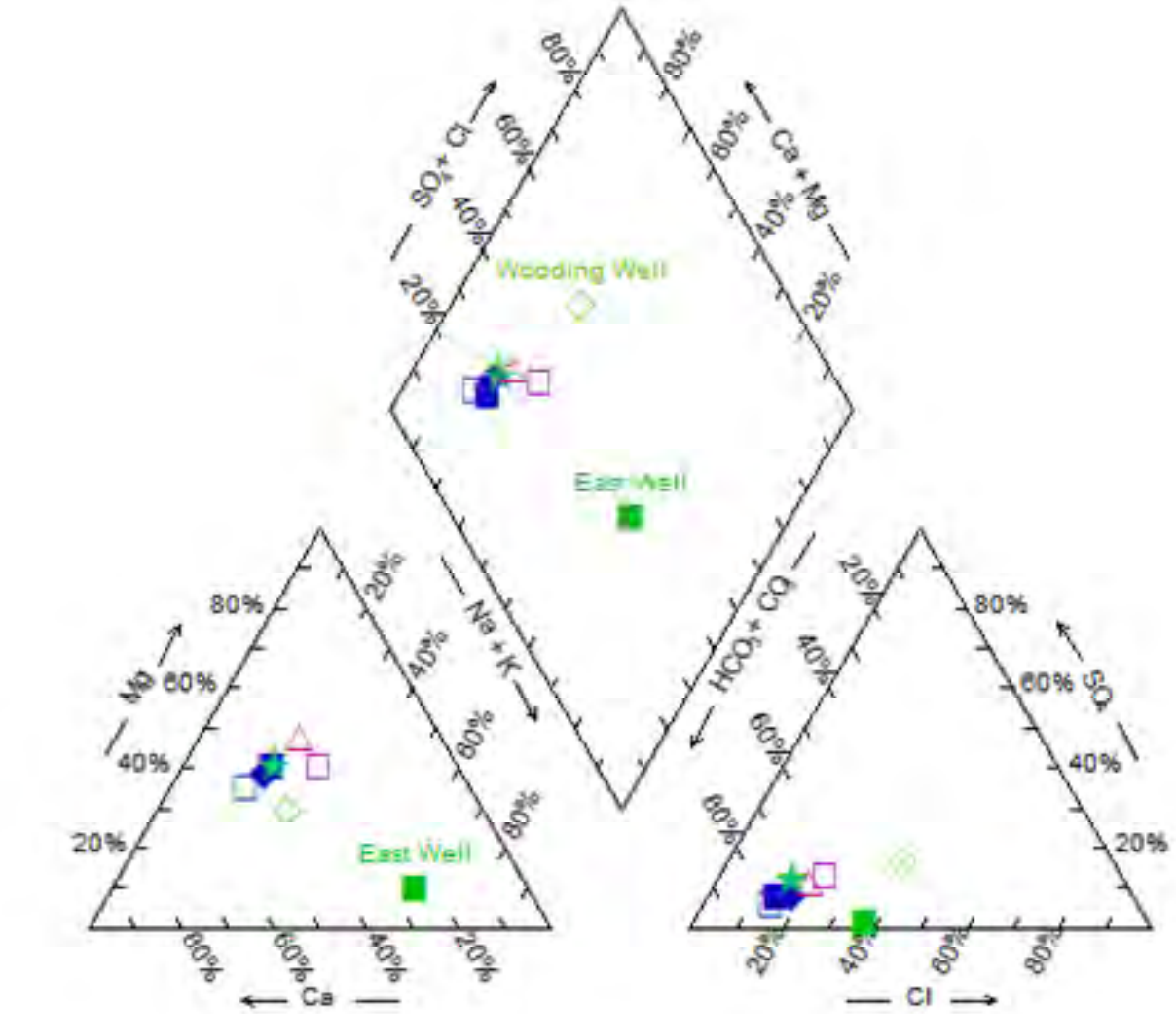
TABLE

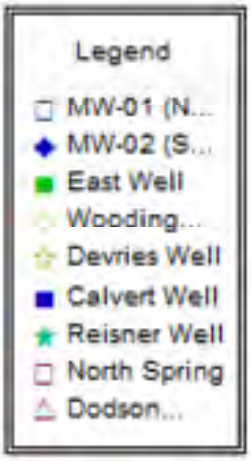
TABLE 3
Water Quality Results

Sample Location	MW-1		MW-2		East Well		Wooding Well		Devries Well		Calvert Well		Reisner Well		North Spring		Dobson Canyon Spring	
Lab ID	SO3		SO6		SO7		SO5		SO4		SO1		SO2		SO8		SO9	
Date Sampled	1/3/2024		1/3/2024		1/3/2024		1/3/2024		1/3/2024		1/3/2024		1/3/2024		1/4/2024		1/4/2024	
Units	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L
Major Cations/Anions																		
Bicarbonate	187	3.065	178	2.917	ND	ND	56.2	0.9211	150	2.458	154	2.524	148	2.426	127	2.081	166	2.721
Calcium	41	2.046	38.2	1.906	3.8	0.1896	19.1	0.9531	29	1.447	27.8	1.387	28.1	1.402	22	1.098	28.7	1.432
Carbonate	ND	ND	ND	ND	17.6	0.5866	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride	20.9	0.5895	25.4	0.7164	12.8	0.361	27.4	0.7729	20.4	0.5754	17.5	0.4936	19.8	0.5585	26.6	0.7503	30.5	0.8603
Magnesium	18.1	1.489	20.8	1.712	0.9	0.07406	8	0.6583	19.3	1.588	16.9	1.391	17.2	1.415	17.9	1.473	25.8	2.123
Potassium	2.6	0.0665	1.9	0.0486	1.0	0.02558	2.1	0.05371	2.5	0.06394	2.8	0.07161	2.9	0.07417	3.4	0.08696	2.3	0.05883
Sodium	14.6	0.6351	18.1	0.7873	11.3	0.4915	13.8	0.6003	15.5	0.6742	14.3	0.622	14.8	0.6438	23	1	22.9	0.9961
Sulfate	10.5	0.2186	14.8	0.3081	0.5	0.01041	15.8	0.3289	20.7	0.431	12.2	0.254	18.7	0.3893	19.7	0.4101	18.4	0.3831
General Water Chemistry																		
Alkalinity (mg CaCO3/L)	187		178		22.8		56.2		150		154		148		127		166	
Ammonia (mg/L)	ND		0.016		0.59		0.007		ND		0.01		ND		0.027		0.012	
Fluoride (mg/L)	0.11		0.1		0.11		ND		ND		0.11		0.11		0.11		0.11	
Iron (mg/L)	0.4		3.2		19.2		1.62		0.006		0.63		1.08		0.74		0.31	
Manganese (mg/L)	0.018		0.0622		0.14		0.0344		0.0198		0.0371		0.0298		0.114		0.0554	
Nitrate (mg/L)	ND		3.34		ND		0.19		ND		ND		ND		1.43		5.55	
Phosphorus (mg/L)	0.081		0.053		0.026		0.034		0.02		0.076		0.157		0.088		0.07	
Total Dissolved Solids (mg/L)	236		257		38		189		222		205		213		218		263	

Notes:
mg/L = milligrams per liter
meq/L = milliequivalents per liter
mg $CaCO_3$/L = milligrams calcium carbonate per liter
ND = not detected

FIGURES

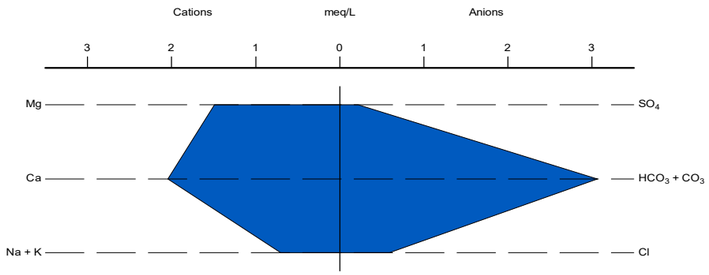




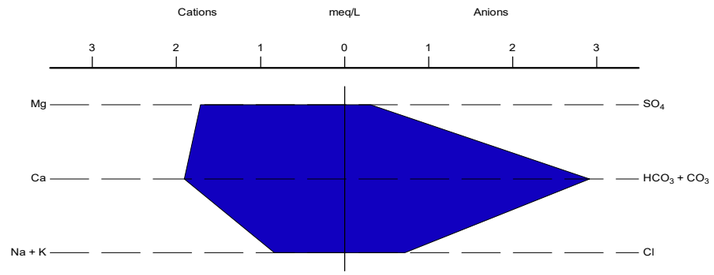
Northwest Groundwater Consultants, LLC	
01127-02	FEBRUARY 2024
PIPER DIAGRAM LAKE ERIE PIT GROUNDWATER EVALUATION SKAGIT COUNTY, WASHINGTON	**FIGURE** **1**

C:\Users\tfmul\OneDrive\NWGWC\Projects\01127-02 February 14, 2024

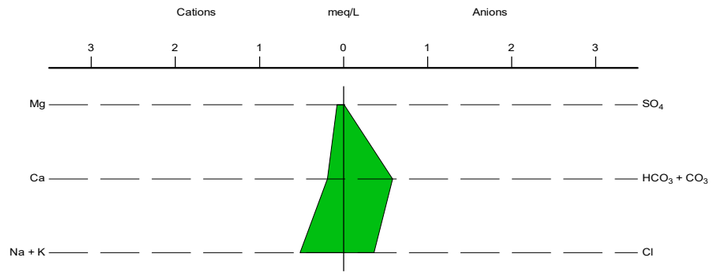
MW-1



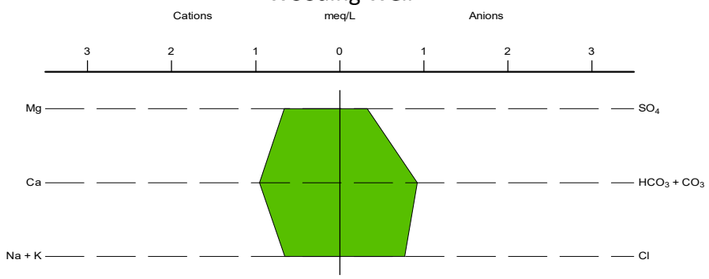
MW-2



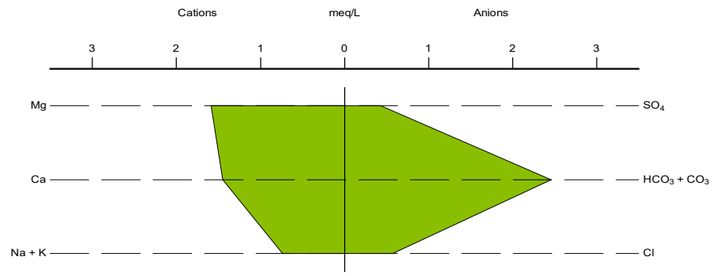
East Well



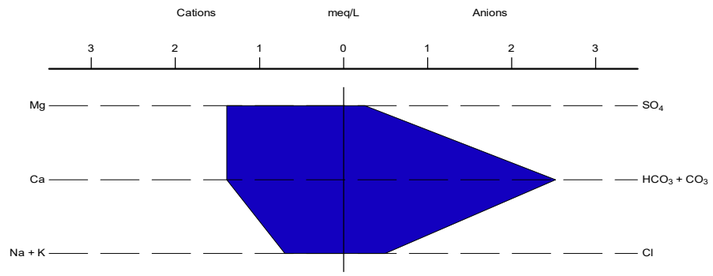
Wooding Well



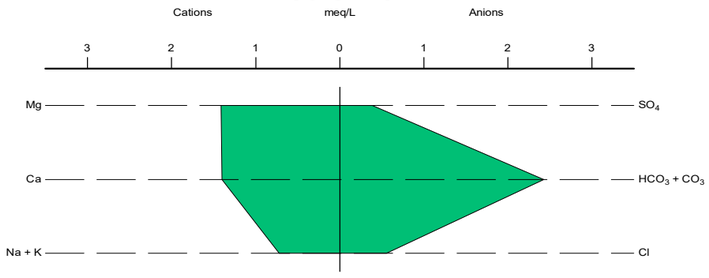
Devries Well



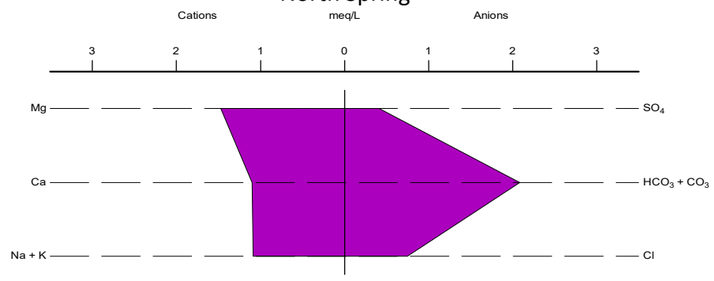
Calvert Well



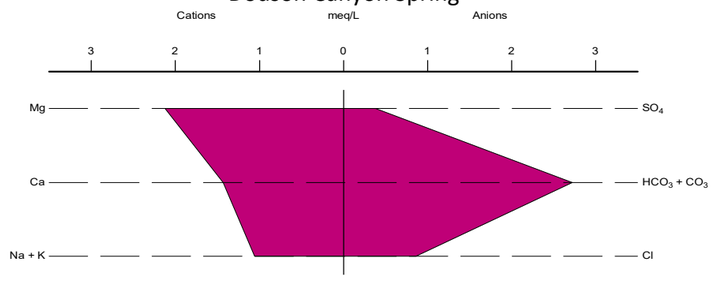
Reisner Well



North Spring

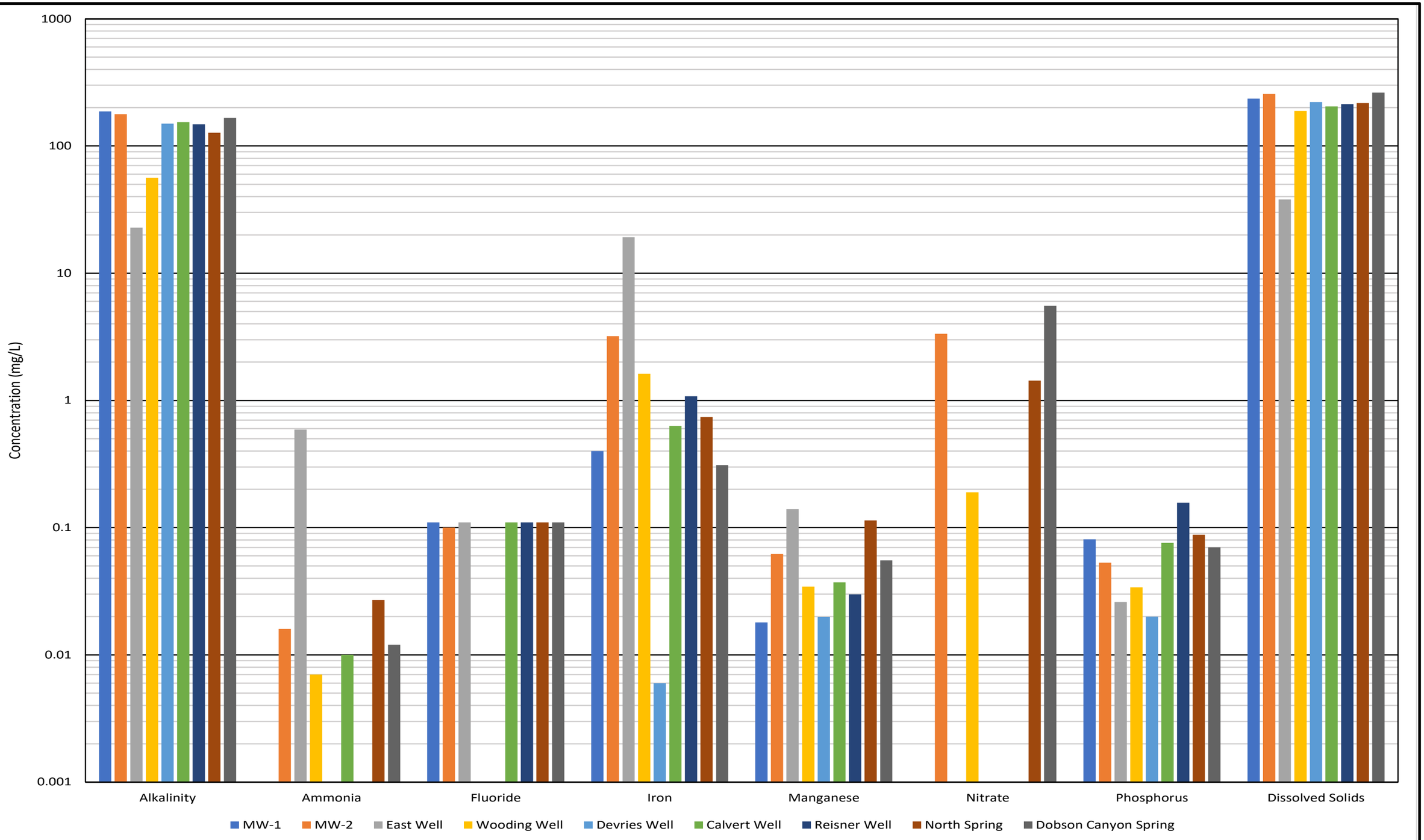


Dodson Canyon Spring

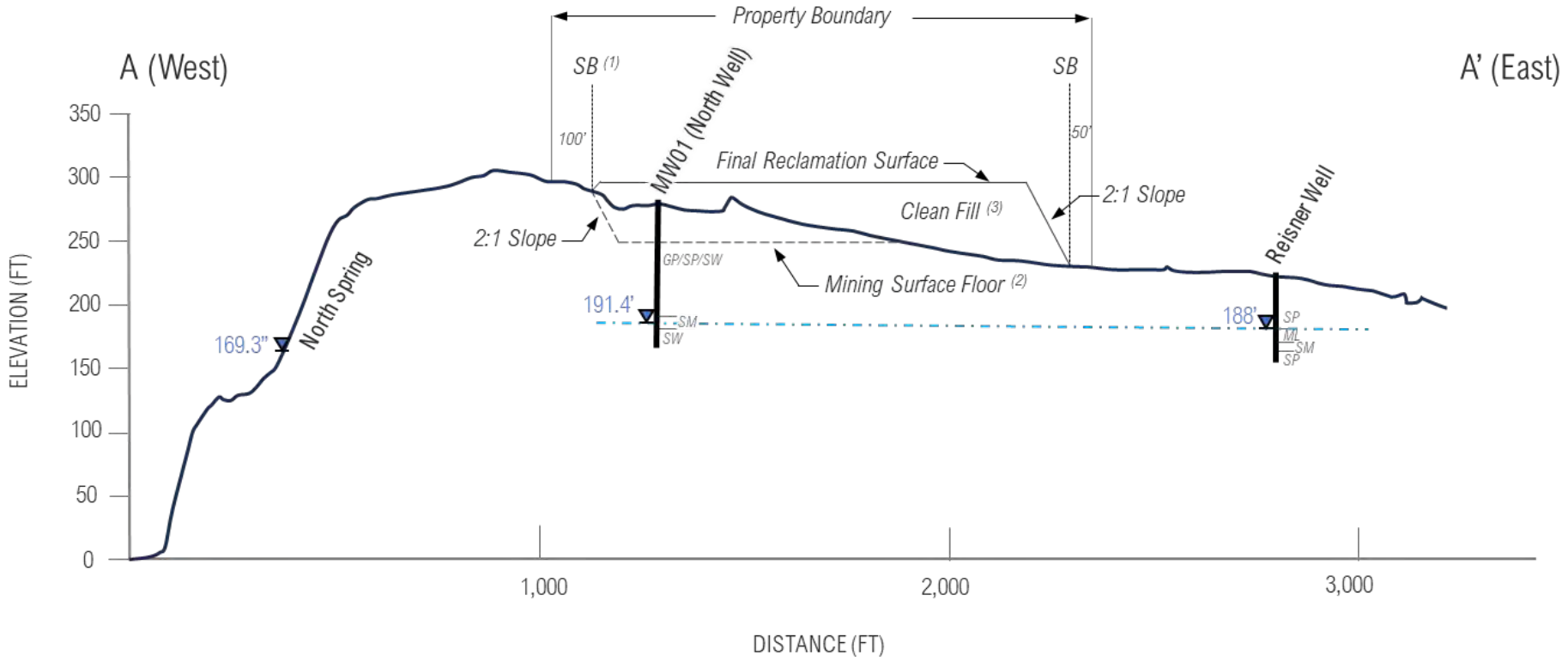


NORTHWEST GROUNDWATER CONSULTANTS, LLC		**STIFF DIAGRAMS** LAKE ERIE PIT GROUNDWATER EVALUATION SKAGIT COUNTY, WASHINGTON
01127-02	FEBRUARY 2024	**FIGURE 2**

C:\Users\tfmul\OneDrive\NWGWC\Projects\01123-01 February 7, 2024



NORTHWEST GROUNDWATER CONSULTANTS, LLC		**GENERAL WATER QUALITY** LAKE ERIE PIT GROUNDWATER EVALUATION SKAGIT COUNTY, WASHINGTON	**FIGURE 3**
01127-02	FEBRUARY 2024		



Water Level Profile

Well

Static Water Level

Notes:

(1) 100-ft setback to final reclamation is only applicable to Parcel 19108. All other parcels will maintain a 50-ft setback to final reclamation surface.

(2) Mine to 50 ft above water table.

(3) Mine floor raised to 300 ft elevation.

SB = Setback

Groundwater elevations measured on 1/31/2024

General Lithology:

MW-1	Reisner Well
0 – 91': *GP, SP, SW*	0 – 18': *CL, SP, GP*
91 – 96': *SM*	18 – 41': *SP*
96 – 110': *SW*	41 – 55': *ML*
	55 – 62': *SM*
	62 – 71': *SP*

Geologic Materials:

GP = Poorly-graded gravel

GW = Well-graded gravel

SP = Poorly-graded sand

SW = Well-graded sand

SM = Silty sand

ML = Silt

Aspect Consulting

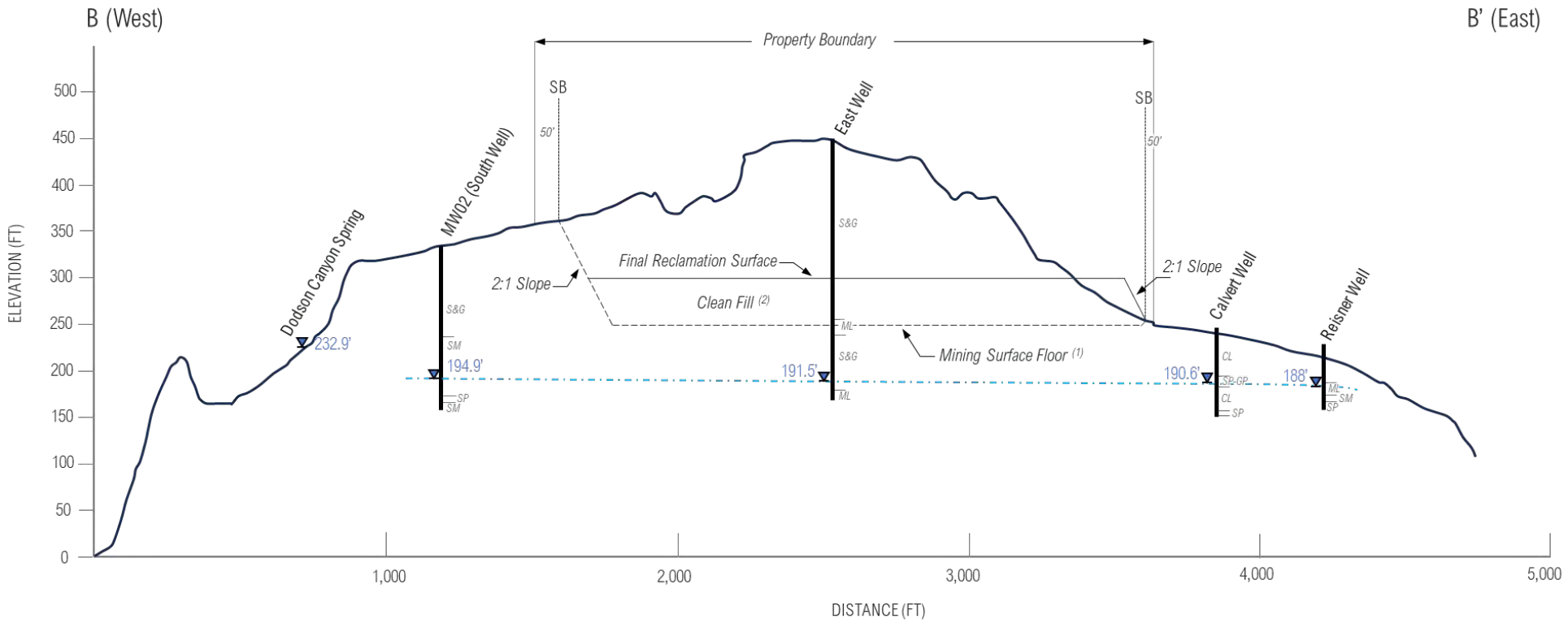
2/27/2024

M:\Lake Erie Gravel Pit\HG X-Section\draft X-SEC Figures_2024.02.27

Figure 4. A-A' Cross Section

Lake Erie Pit

Skagit County, Washington



Water Level Profile

Well

Static Water Level

Notes:

(1) Mine to 50 ft above water table.

(2) Mine floor raised to 300 ft elevation.

SB = Setback

Groundwater elevations measured on 1/31/2024

Geologic Materials:

GP = Poorly-graded gravel

GW = Well-graded gravel

SP = Poorly-graded sand

SW = Well-graded sand

SM = Silty sand

ML = Silt

CL = Clay

General Lithology:

MW-2	East Well	Calvert Well	Reisner Well
0 – 92': *SP, SW, GP, GW*	0 – 180': *SP, SW, GP, GW*	0 – 55': *CL*	0 – 18': *CL, SP, GP*
92 – 160': *SM*	180 – 189': *SW-SM*	55 – 59': *SP, GP*	18 – 41': *SP*
160 – 169': *SP*	189 – 209': *ML*	59 – 92': *CL*	41 – 55': *ML*
169 – 174': *SM*	209 – 240': *SW, GW, SP*	92 – 96': *SP*	55 – 62': *SM*
	240 – 257': *SP-SM*		62 – 71': *SP*
	257 – 277': *ML*		

Aspect Consulting

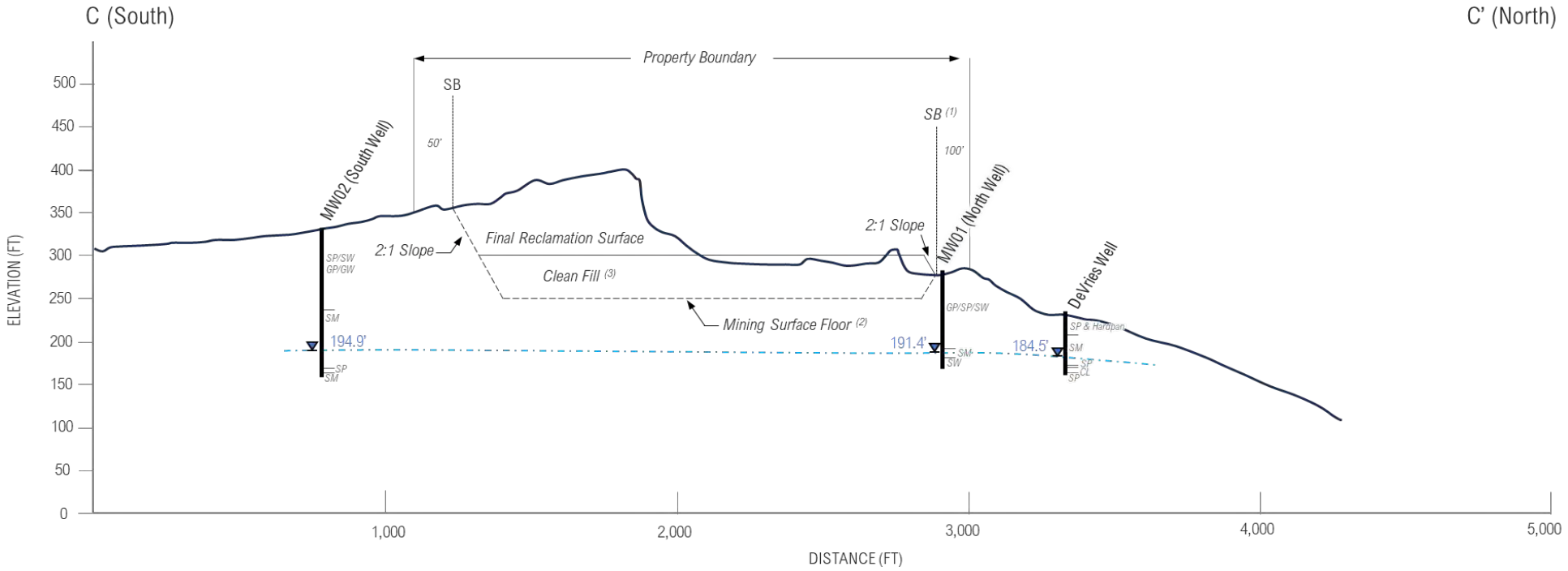
2/27/2024

M:\Lake Erie Gravel Pit\HG X-Section\draft X-SEC Figures_2024.02.27

Figure 5. B-B' Cross Section

Lake Erie Pit

Skagit County, Washington



Water Level Profile

Well

Static Water Level

Notes:

(1) 100-ft setback to final reclamation is only applicable to Parcel 19108. All other parcels will maintain a 50-ft setback to final reclamation surface.

(2) Mine to 50 ft above water table.

(3) Mine floor raised to 300 ft elevation.

SB = Setback

Groundwater elevations measured on 1/31/2024

Geologic Materials:

GP = Poorly-graded gravel

GW = Well-graded gravel

SP = Poorly-graded sand

SW = Well-graded sand

SM = Silty sand

CL = Clay

General Lithology:

MW-2	MW-1	Devries Well
0 – 92': *SP, SW, GP, GW*	0 – 91': *GP, SP, SW*	0 – 23': *SP & Hardpan*
92 – 160': *SM*	91 – 96': *SM*	23 – 59': *SM*
160 – 169': *SP*	96 – 110': *SW*	59 – 64': *SP*
169 – 174': *SM*		64 – 67': *CL*
		67 – 77': *SP*

Aspect Consulting

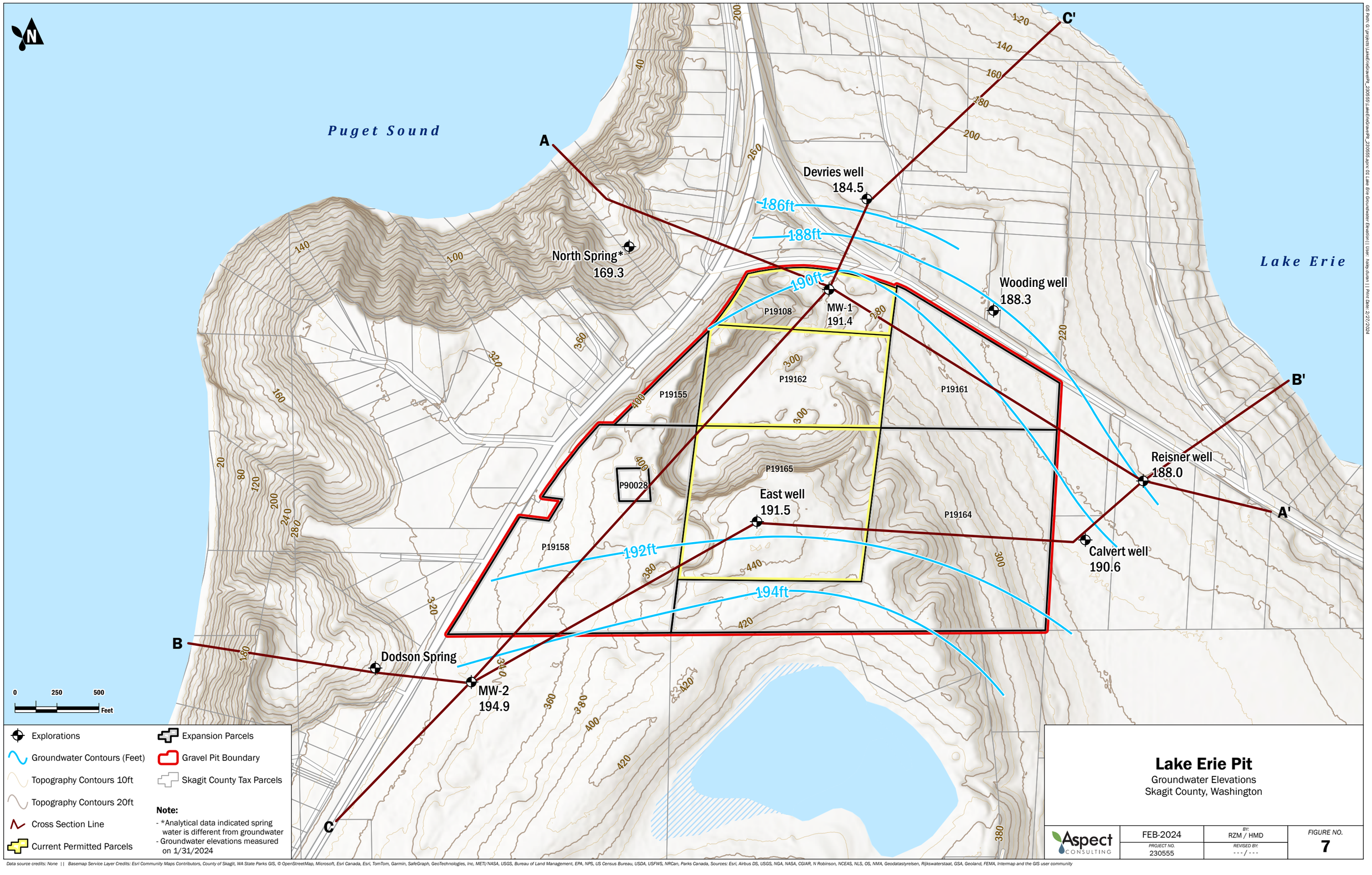
2/27/2024

M:\Lake Erie Gravel Pit\HG X-Section\draft X-SEC Figures_2024.02.27

Figure 6. C-C' Cross Section

Lake Erie Pit

Skagit County, Washington



Lake Erie Pit

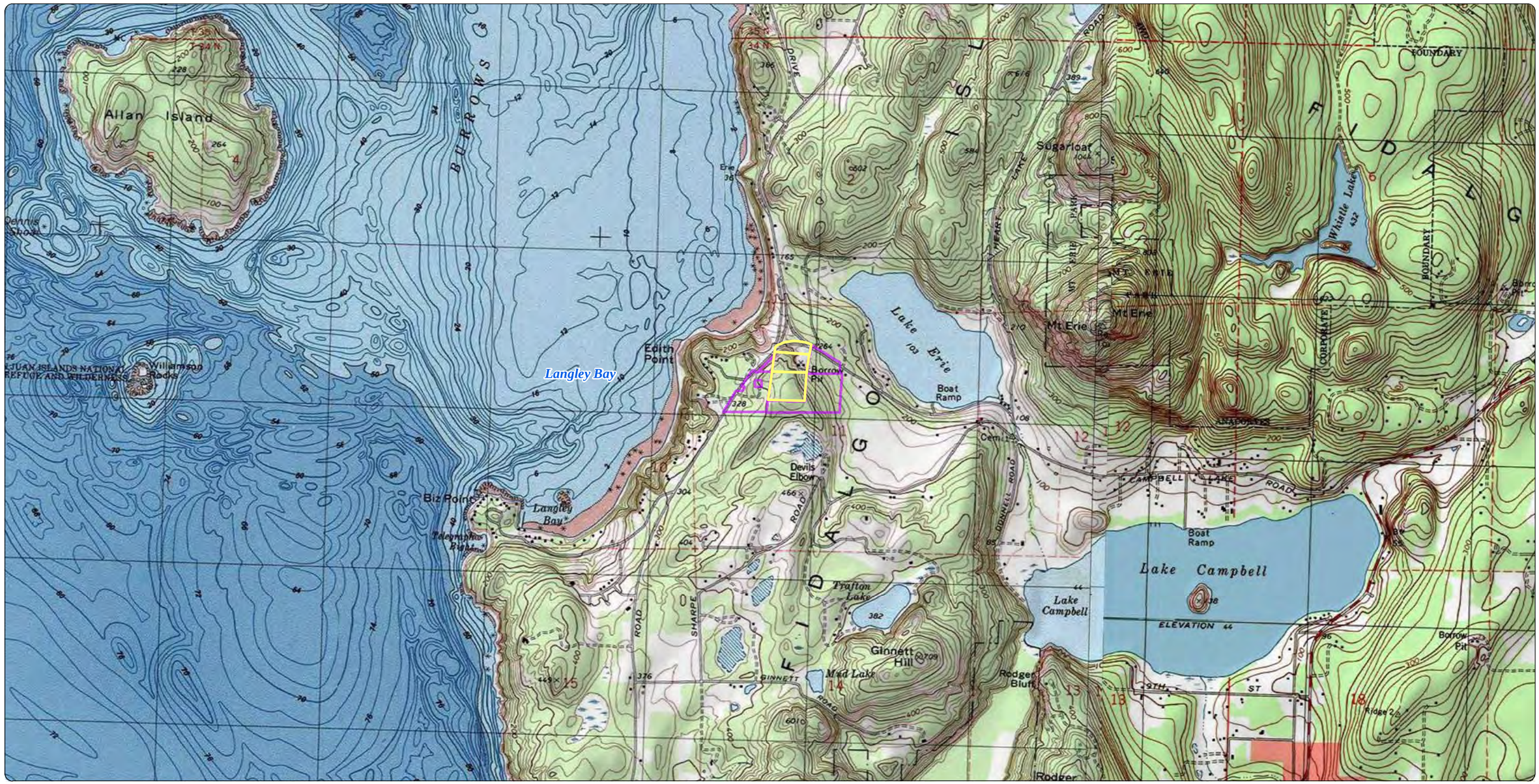
Groundwater Elevations
Skagit County, Washington

Aspect Consulting	FEB-2024	BY: RZM / HMD	FIGURE NO. 7
	PROJECT NO. 230555	REVISED BY: ---/---	

ATTACHMENT A

Hydrogeologic Assessment Figures

Path: X:\1268.02_McLucas_and_Associates\Project\Hydrogeologic\Site_Vicinity.mxd



Source: USGS Quadrangle maps obtained from Esri ArcGIS Online

Current Permitted Parcels

Expansion Parcels

Figure 1
Site Vicinity

Lake Erie Pit Mine
Anacortes, Washington

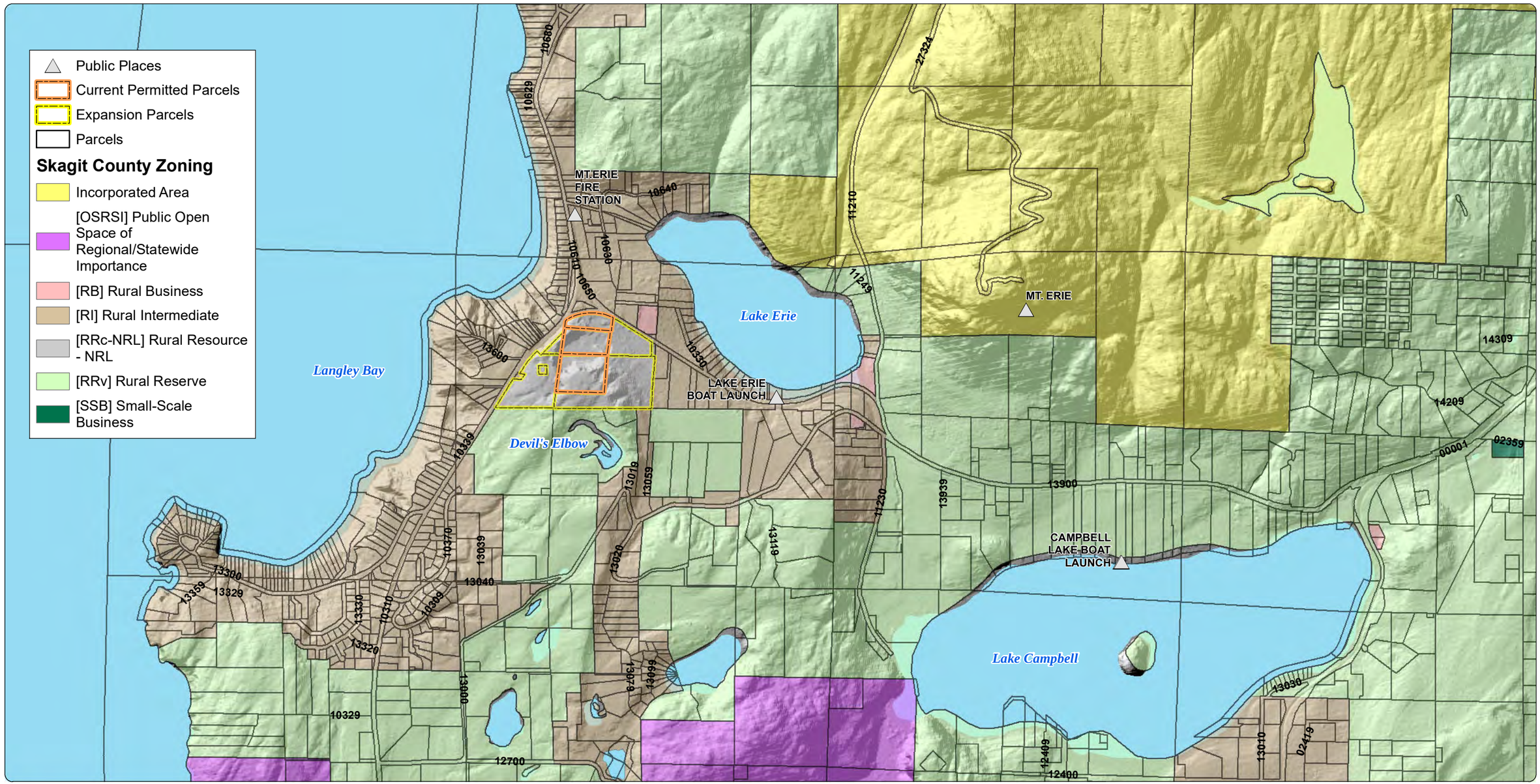
0 970 1,940
Feet

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

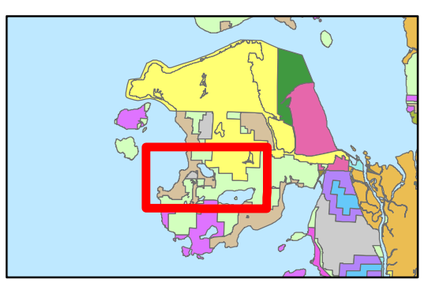
Print Date: 9/23/2016

Produced By: estrandhagen Approved By:

Project:



Source: Skagit County Zoning.

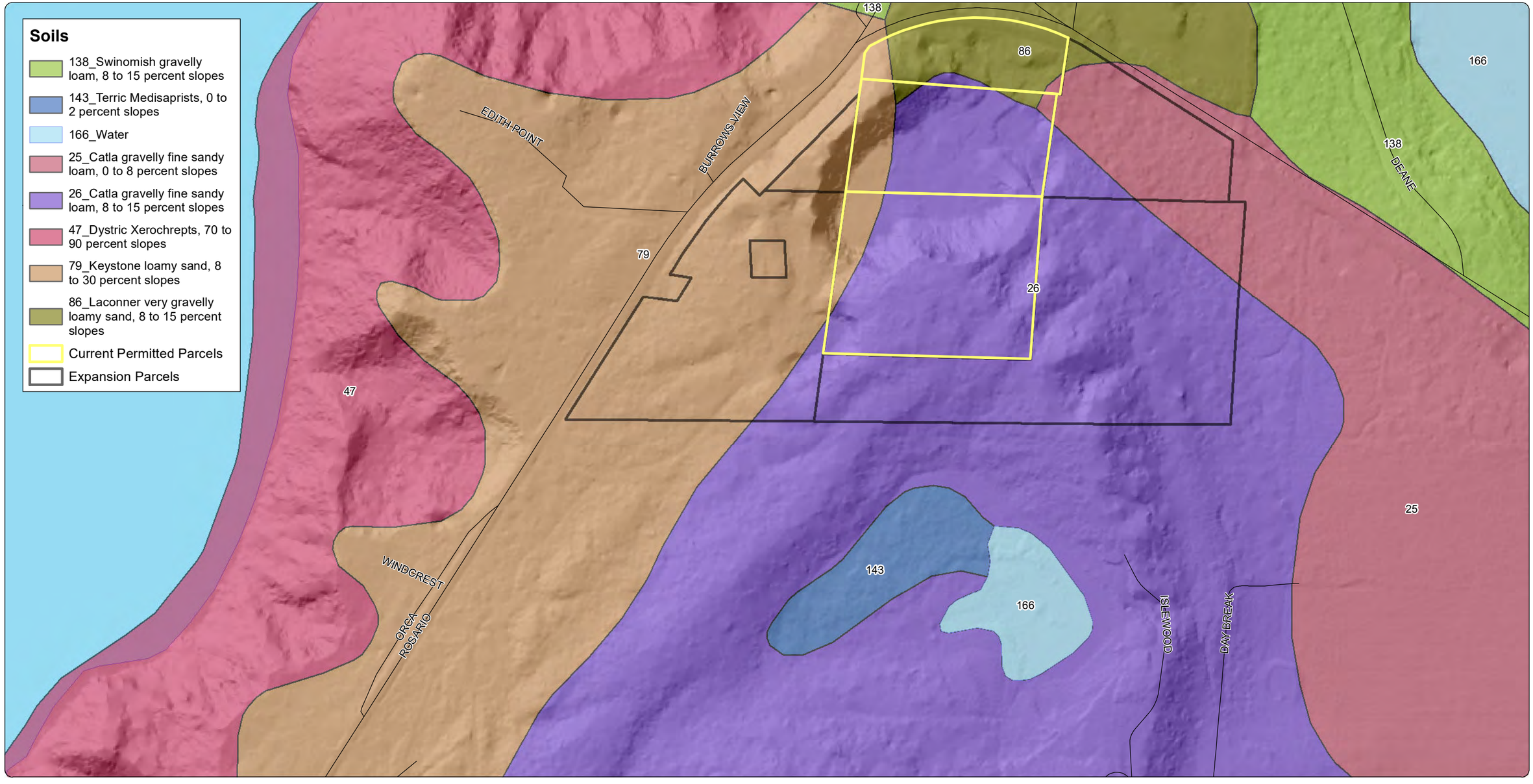


MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

Figure 2
Skagit County Zoning
Lake Erie Pit Mine
Anacortes, Washington

0 725 1,450
Feet

Print Date: 9/23/2016
Produced By: estrandhagen Approved By:
Project:



Source: Aerial photograph obtained from Esri ArcGIS Online

Notes:
1. Soil data provided by the Natural Resources Conservation Service.

Figure 3
NRCS Soil

Lake Erie Pit Mine
Anacortes, Washington

0 175 350
Feet

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

Print Date: 9/28/2016
Produced By: estrandhagen Approved By:
Project:

Path: X:\1268.02_McLucas_and_Associates\Project\Hydrogeologic\Site_Map_Geology_100k.mxd

Current Permitted Parcels

Expansion Parcels

Faults

Movement Unknown

Fault, unknown offset - Identity and existence certain, location accurate [1]

Fault, unknown offset - Identity and existence certain, location concealed [3]

Fault, unknown offset - Identity or existence questionable, location concealed [6]

Contact - Identity and existence certain, location accurate [1]

Contact - Identity and existence certain, location concealed [2]

Shoreline [5]

Geologic Units

Quaternary alluvial fans, beach deposits, undifferentiated sedimentary deposits, lacustrine deposits, landslides, peat, terraced deposits, and talus

Pleistocene continental glacial, glaciolacustrine, and outburst flood deposits, Fraser-age

Sedimentary and Volcanic Rocks

Cretaceous-Jurassic volcanic, volcaniclastic, and mixed volcanic and sedimentary rocks

Intrusive Igneous Rocks

Mesozoic intrusive igneous rocks

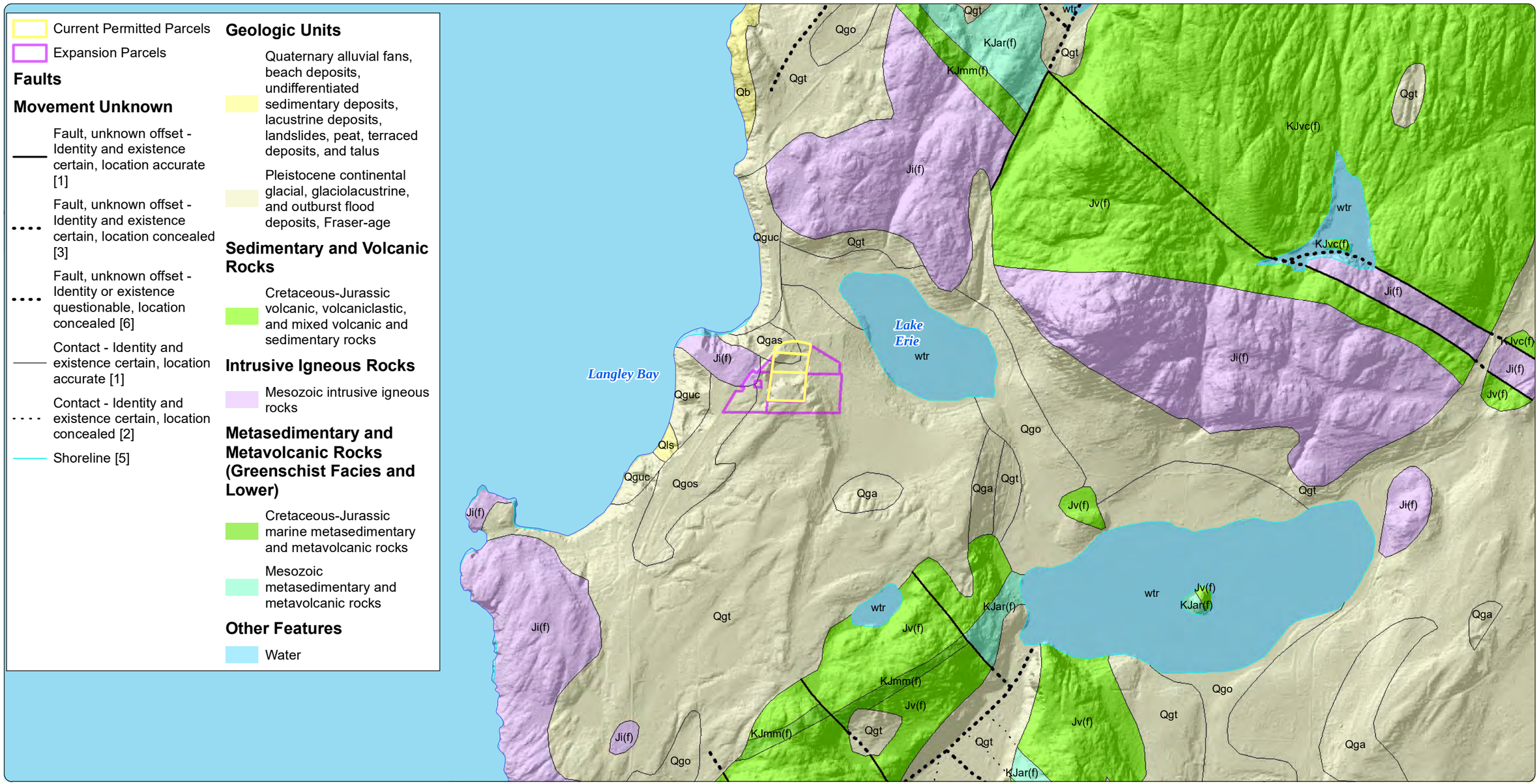
Metasedimentary and Metavolcanic Rocks (Greenschist Facies and Lower)

Cretaceous-Jurassic marine metasedimentary and metavolcanic rocks

Mesozoic metasedimentary and metavolcanic rocks

Other Features

Water



Source: Aerial photograph obtained from Esri ArcGIS Online

Notes:
1. 1:100,000 scale Geology data provided Washington Department of Natural Resources.

Geology Unit	Lithology
Ji(f)	intrusive rocks, undivided
Jv(f)	volcanic rocks
KJar(f)	argillite
KJmm(f)	marine metasedimentary rocks
KJvc(f)	volcaniclastic deposits or rocks
Qb	beach deposits
Qga	advance continental glacial outwash, Fraser-age
Qgas	advance continental glacial outwash, sand, Fraser-age
Qgo	continental glacial outwash, Fraser-age
Qgos	continental glacial outwash, sand, Fraser-age
Qgt	continental glacial till, Fraser-age
Qguc	glacial and non-glacial deposits, undivided
Qls	mass-wasting deposits, mostly landslides
wtr	water

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

Figure 4
Geology of Site and Vicinity

Lake Erie Pit Mine
Anacortes, Washington

0 970 1,940
Feet

Print Date: 9/26/2016
Produced By: estrandhagen Approved By:
Project:

ATTACHMENT B

Well Logs

Lake Erie Pit - 230555

Monitoring Well Log

Aspect CONSULTING

Project Address & Site Specific Location	Coordinates (Lat,Lon WGS84)	Exploration Number
13540 Rosario Road, Anacortes, WA 98221, North Well	48.4520, -122.6511	**MW01**

Contractor	Equipment	Sampling Method	Ground Surface Elev. (NAVD88)	Ecology Well Tag No.
Aquatech	Rotary drill rig	Grab	277.96'	BPN970

Operator	Exploration Method(s)	Work Start/Completion Dates	Top of Casing Elev. (NAVD88)	Depth to Water (Below GS)
Brandon	Air rotary	12/5/2023 to 12/6/2023	281.86'	90.5' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	280	Compression Cap 6-inch Diameter Steel Casing					**Fill** GRAVEL WITH SAND AND COBBLES (GP); mixed sand and cobbles; surface fill.	0
5	275	Bentonite Seal					**Unconsolidated Deposits** GRAVEL WITH SAND (GP); dry, gray to dark gray-brown; medium to coarse, subrounded to rounded sand; fine, subrounded to rounded gravel.	5
10	270	Driller added water to mitigate heaving sands.					Increase in gravel content at 9 ft below ground surface.	10
15	265						SAND WITH GRAVEL (SP); dry, gray; medium to coarse, subrounded to subangular sand; fine to coarse, subrouded up 2-inch diameter gravel. Trace fines (silt).	15
20	260	Temporary 10-inch casing advanced to 18 ft below ground surface during drilling.					SAND WITH GRAVEL (SW); dry, gray; fine, subrounded sand; fine, rounded gravel; trace fines.	20
25	255						SAND (SW); dry, gray; fine, subrounded sand; trace medium gravel; trace fines.	25
30	250							30
35	245						SAND WITH GRAVEL (SW); dry, light gray; fine to medium, subrounded sand; fine, subrounded gravel.	35
40	240							40
45	235						SAND (SW); dry, gray; fine to medium, subrounded sand; trace fine to medium gravel.	45
50	230							50
55	225						Becomes mostly medium sand; coarsening downward.	55
60	220						Becomes fine sand.	60
65	215							65
70	210						Becomes medium to coarse sand.	70

Legend

Sample Type

Water Level
- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: Ryan M
Approved by:

Exploration Log MW01

Lake Erie Pit - 230555

Monitoring Well Log

Project Address & Site Specific Location: 13540 Rosario Road, Anacortes, WA 98221, North Well			Coordinates (Lat,Lon WGS84): 48.4520, -122.6511
Exploration Number: **MW01**			
Contractor: Aquatech	Equipment: Rotary drill rig	Sampling Method: Grab	Ground Surface Elev. (NAVD88): 277.96'
Ecology Well Tag No. BPN970			
Operator: Brandon	Exploration Method(s): Air rotary	Work Start/Completion Dates: 12/5/2023 to 12/6/2023	Top of Casing Elev. (NAVD88): 281.86'
Depth to Water (Below GS): 90.5' (Static)			

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
75	205						SAND (SW); dry, gray; fine to medium, subrounded sand; trace fine to medium gravel. (continued)	75
80	200							80
85	195						Becomes gray-brown, fine to medium sand; trace fine, subrounded gravel.	85
90	190	▼ 12/6/2023 ▼ 1/31/2024 ▽ 12/5/2023 Water encountered at 92 ft below ground surface during drilling.						90
95	185						SILTY SAND (SM); dry becoming wet, gray; fine sand; decreasing silt content.	95
100	180						SAND (SW); wet, light gray; fine to medium, subrounded sand; trace silt.	100
105	175	5 ft of 10-slot screen with packer.						105
110	170						Bottom of exploration at 110 ft. bgs.	110
115	165							115
120	160							120
125	155							125
130	150							130
135	145							135
140	140							140
145	135							145

Legend

Sample Type

Water Level
- ▼ Static Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: Ryan M
Approved by:

Exploration Log MW01
Sheet 2 of 2

Lake Erie Pit - 230555

Monitoring Well Log

Project Address & Site Specific Location: 13540 Rosario Road, Anacortes, WA 98221, South Well		Coordinates (Lat,Lon WGS84): 48.4479, -122.6569	Exploration Number: **MW02**
Contractor: Aquatech	Equipment: Rotary drill rig	Sampling Method: Grab	Ground Surface Elev. (NAVD88): 331.59'	Ecology Well Tag No. BPN971
Operator: Brandon	Exploration Method(s): Air rotary	Work Start/Completion Dates: 12/5/2023 to 12/8/2023	Top of Casing Elev. (NAVD88): 334.59'	Depth to Water (Below GS): 139.7' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	330	Compression Cap 6-inch Diameter Steel Casing					**Unconsolidated Deposits** SAND WITH GRAVEL (SP); gray-brown; medium to coarse, subrounded to subangular sand; fine to coarse, subrounded up to 2-inch diameter gravel.	0
5	325	Bentonite Seal					SAND WITH GRAVEL (SW); gray-brown; medium to coarse, subrounded to subangular sand; fine to coarse, subrounded up to 2-inch diameter gravel.	5
10	320	Temporary 10-inch casing advanced to 18 ft below ground surface during drilling.					SAND WITH GRAVEL (SP); dark gray; medium sand; fine to coarse, subrounded up to 2-inch diameter gravel.	10
15	315						SAND (SP); brown; fine to medium sand	15
20	310						GRAVEL WITH SAND (GW); brown; fine to coarse, subrounded sand; mostly fine, rounded to subangular gravel. Becomes mostly coarse sand; increaseing sand content with depth	20
25	305						SAND (SW); gray-brown; coarse sand	25
30	300	Driller indicates rough drilling conditions					GRAVEL (GW); gray-brown; little fine to coarse sand; few cobbles and broken rock fragments	30
35	295						GRAVEL WITH SAND (GP); gray; medium to coarse sand; fine, subrounded to subangular, fine to medium gravel; broken rock fragments.	35
40	290							40
45	285							45
50	280							50
55	275						Mostly cobbles 55 ft to 57 ft below ground surface.	55
60	270							60
65	265	Slow, difficult drilling conditions						65
70	260						Decreasing sand content; large rock fragments in	70

Legend

Sample Type

Water Level
- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: Ryan M
Approved by:

Exploration Log MW02

Aspect CONSULTING	Lake Erie Pit - 230555		Monitoring Well Log	
	Project Address & Site Specific Location 13540 Rosario Road, Anacortes, WA 98221, South Well		*Coordinates (Lat,Lon WGS84)* 48.4479, -122.6569	*Exploration Number* **MW02**
Contractor Aquatech	*Equipment* Rotary drill rig	*Sampling Method* Grab	*Ground Surface Elev. (NAVD88)* 331.59'	Ecology Well Tag No. BPN971
Operator Brandon	*Exploration Method(s)* Air rotary	*Work Start/Completion Dates* 12/5/2023 to 12/8/2023	*Top of Casing Elev. (NAVD88)* 334.59'	*Depth to Water (Below GS)* 139.7' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
75	255						drilling cuttings. SAND WITH GRAVEL (SW); gray; fine to coarse, subrounded to subangular sand; fine, subrounded to subangular gravel.	75
80	250	▽ 12/6/2023 Perched water zone encountered during drilling					SAND (SP); brown; fine to medium, subrounded sand; trace silt.	80
85	245							85
90	240						SILTY SAND (SM); blue-gray; low plasticity fines; fine to medium sand.	90
95	235							95
100	230							100
105	225						Increase in sand content	105
110	220							110
115	215							115
120	210							120
125	205							125
130	200							130
135	195						SILTY SAND (SM); moist, light brown; low plasticity fines; fine, subrounded sand; grades into unit above.	135
140	190	▼ 1/31/2024 12/8/2023						140
145	185							145

Legend

Sample Type

Water Level
- ▼ Static Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: Ryan M
Approved by:

Exploration Log MW02
Sheet 2 of 3

Aspect CONSULTING	Lake Erie Pit - 230555		Monitoring Well Log	
	Project Address & Site Specific Location 13540 Rosario Road, Anacortes, WA 98221, South Well		*Coordinates (Lat,Lon WGS84)* 48.4479, -122.6569	*Exploration Number* **MW02**
Contractor Aquatech	*Equipment* Rotary drill rig	*Sampling Method* Grab	*Ground Surface Elev. (NAVD88)* 331.59'	Ecology Well Tag No. BPN971
Operator Brandon	*Exploration Method(s)* Air rotary	*Work Start/Completion Dates* 12/5/2023 to 12/8/2023	*Top of Casing Elev. (NAVD88)* 334.59'	*Depth to Water (Below GS)* 139.7' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
150	180	▼ 12/7/2023					SILTY SAND (SM); moist, light brown; low plasticity fines; fine, subrounded sand; grades into unit above. (continued)	150
155	175							155
160	170						SAND (SP); gray; fine, subrounded sand.	160
165	165	5 ft of 10-slot screen with packer.						165
170	160						SILTY SAND (SM); grey; low plasticity fines; fine to medium sand.	170
175	155						Bottom of exploration at 169 ft. bgs.	175
180	150							180
185	145							185
190	140							190
195	135							195
200	130							200
205	125							205
210	120							210
215	115							215
220	110							220

Legend

Sample Type

Water Level
- ▼ Static Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: Ryan M
Approved by:

Exploration Log MW02
Sheet 3 of 3

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☐ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well **6** inches, drilled **280** ft.
Depth of completed well **278** ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded **6**" Diam. from **+2** ft. to **278** ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used _____
SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? **18** ft.
Material used in seal **BENTONITE**
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level **255.4** ft. below top of well Date **9/19/17**
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest **.5** gal./min. with stem set at **275** ft. for **1** hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. **RE14827**

Unique Ecology Well ID Tag No. **BJF103**

Water Right Permit No. _____

Property Owner Name **LAKE ERIE TRUCKING**

Well Street Address **13540 ROSARIO RD**

City ANACORTES County SKAGIT

Location SE1/4-1/4 **NW**1/4 Sec **11** Twn **34** R **1** **EWM** ☒
(s, t, r Still REQUIRED) **Or WWM** ☐

Lat/Long
Lat Deg _____ Lat Min/Sec _____
Long Deg _____ Long Min/Sec _____

Tax parcel No. (Required) **P19164**

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN SILT GRAVEL SAND	**0**	**3**
GRAY SILT GRAVEL SAND	**3**	**12**
BROWN SAND SILT GRAVEL	**12**	**38**
BROWN FINE SAND SILT	**38**	**53**
BROWN SAND GRAVEL	**53**	**189**
BROWN CLAY	**189**	**202**
GRAYCLAY	**202**	**209**
BROWN SAND	**209**	**261**
GRAY SAND SILT	**261**	**271**
BROWN FINE SAND SEEPAGE	**271**	

Start Date **9/18/17** Completed Date **9/19/17**

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) **Brannon Hopke**
Driller/Engineer/Trainee Signature
Driller or trainee License No. **1825**
IF TRAINEE: Driller's License No:
Driller's Signature:

Drilling Company **Aquatech Well Drilling &Pumps Inc.**
Address **2675 Butler Crk. Rd.**
City, State, Zip **Sedro Woolley** **WA. 98284**
Contractor's Registration No. **AQUATWDO4OK4** Date **9/25/17**

ECY 050-1-20 (Rev 02-2010) To request ADA accommodation including materials in a format for the visually impaired, call Ecology Water Resources Program at 360-407-6872. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

P19111 424849 34-1E 11G

File Original and First Copy with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's copy

18567?

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W207527
UNIQUE WELL I.D. # ALQ297
Water Right Permit No. _____

(1) OWNER: Name Nels Strandberg Address P.O. Box 319, Anacortes, WA 98221

(2) LOCATION OF WELL: County skagit - SW 1/4 NE 1/4 Sec 11 T. 34 N.,R 1E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 13507 Rosario Rd Anacortes

TAX PARCEL NO. _____

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (If more than one) _____
[X] New Well Method: [ ] Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [ ] Jetted [ ] Decommission

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 100 feet. Depth of completed well 96 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed:
[X] Welded 6 " Diam. from +2 ft. to 92 ft.
[ ] Liner installed _____ " Diam. from _____ ft. to _____ ft.
[ ] Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: [ ] Yes [X] No
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: [X] Yes [ ] No [ ] K-Pac Location _____
Manufacturer's Name johnson
Type ss Model No. _____
Diam. 6 Slot size 6 from 91 ft. to 96 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravel/sand _____
Material placed from _____ ft. to _____ ft.

Surface seal: [X] Yes [ ] No To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 55 ft. below top of well Date 10/31/2005
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test 5 gal./min. with 20 ft. drawdown after 1 hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analyses made? [ ] Yes [X] No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION:
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
topsoil	0	1
brown clay scattered gravel	1	16
gray sandy clay	16	55
tan sand gravel silt seepage	55	59
gray clay	59	70
gray fine sand clay layered	70	79
gray clay	79	92
gray fine sand water	92	96
gray clay fine sand layered	96	
Located in complience with sec 12-48 based on information supplied by owner.		
05240		

RECEIVED
NOV 29 2005
DEPT OF ECOLOGY

Work Started 10/28/2005 , 19. Completed 10/31/2005 , 19

WELL CONSTRUCTION CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Wayne Logsdon (Licensed Driller/Engineer) License No. 2146
Trainee Name _____ License No. _____
Drilling Company Aquatech Well Drilling & Pumps Inc
(Signed) Wayne Logsdon (Licensed Driller/Engineer) License No. 2146
Address 2722 Butler Crk Rd SedroWoolley Wa 98284
Contractor's Registration No. AQUATWD040K4 Date 11/1/2005 , 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

374869 P19106 ✓ 3644 34-1E-11C

WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle) 145171
- ☒ Construction
- ○ Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT
Notice of Intent No. W-175637
Unique Ecology Well ID Tag No. AGR 581
Water Right Permit No.

Property Owner Name Thomas C WILL
Well Street Address 13060 S. Wildwood Ln
City Anacortes County: Skagit
Location NE 1/4- 1/4 NW 1/4 Sec. 11 Twn 34N R. 1 (EWM) or WWM — circle one
Lat/Long: (s,t,r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____
Tax Parcel No.

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK: Owner's number of well (if more than one)
☒ New Well ☐ Reconditioned *Method* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☒ Cable ☐ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 77 ft
Depth of completed well 77 ft

CONSTRUCTION DETAILS
Casing Installed: ☐ Welded 6" Diam from +1.3 ft to 67 ft
☐ Liner installed ____" Diam from ____ ft to ____ ft
☐ Threaded ____" Diam from ____ ft to ____ ft

Perforations: ☐ Yes ☒ No
Type of perforator used
SIZE of perfs ____ in by ____ in and no of perfs ____ from ____ ft to ____ ft

Screens: ☒ Yes ☐ No ☒ K-Pac Location 66 FT
Manufacturer's Name
Type Stainless Wire Model No
Diam 6 Slot Size 8 from 67 ft to 77 ft
Diam ____ Slot Size ____ from ____ ft to ____ ft

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand
Materials placed from ____ ft to ____ ft

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft
Materials used in seal
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? Depth of strata
Method of sealing strata off

PUMP: Manufacturer's Name
Type HP

WATER LEVELS: Land-surface elevation above mean sea level 250 ft
Static level 55 ft below top of well Date 1/28/04
Artesian pressure ____ lbs per square inch Date
Artesian water is controlled by (cap, valve, etc)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☐ No If yes, by whom?
Yield ____ gal/min with ____ ft drawdown after ____ hrs
Yield ____ gal/min with ____ ft drawdown after ____ hrs
Yield ____ gal/min with ____ ft drawdown after ____ hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 5 gal/min with 8 ft drawdown after 1 hrs
Airtest ____ gal/min with stem set at ____ ft for ____ hrs
Artesian flow ____ g p m Date 1/28/04
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Sandy		5
Hardpan	5	23
silty sand	23	59
Fine sand w water	59	64
Clay	64	67
Fine sand W. water	67	77
clay	77	
Well site meets all Set Backs under I.C.C 80g		
Based on info supplied by owner		

X

RECEIVED
FEB 11 2004
DEPT OF ECOLOGY

Start Date Jan 26/04 Completed Date Jan 28/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Gary Boonstra
Driller/Engineer/Trainee Signature Gary Boonstra
Driller or Trainee License No. 00038

Drilling Company WHIDBEY WELL DRILLERS
Address 716 Holbrook Rd
City, State, Zip Coupeville Wa 98239
Contractor's Registration No. WHIDBWD971LT Date 1/28/04

If trainee, licensed driller's Signature and License no.

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 4/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

SC Well ID: 2934	DOE Well ID:	Unique Well ID:	NOI	Water Right Permit #

Owner

Last Name	First Name	Organization	Road	City	State	Zip
Gates	Charles		1/2 mi.W of Lake Erie	Anacortes	WA	98221

Location

Parcel	Road	City	Zip	Q2	Q1	S	T	R	Elevation
19127	1/2 mi. W of Lake Erie	Anacortes	98221	SE	NE	11	34	1	

Dimensions

Diameter	Depth	CompletedDepth
6	89	68

Water Levels

Flow	Measured By	Depth	Measured Date
		35	19680801

Work

Proposed Use	Work Type	Method	Owners Well Number	Started	Completed
Domestic	New Well	Cable		19680801	19680801

Casing

Connection Method	Diameter	Top	Bottom
	6	+2	68

Perforation

Type	Size	Quantity	Top	Bottom

Screens

Manufacturer	Type	Model	Diameter	Slotsize	Top	Bottom
Cook	stainless steel	KO	6	10	64	68

Pump

Manufacturer	Type	Horsepower

Gravel Pack

Size	Top	Bottom

Surface Seal

Depth	Seal	Method

Unusable Water

Water Type	Depth	Method

Temperature Reading

Temperature	Date Measured	Measured By

Artesian Pressure

Pressure	Measured Date	Controlled By

Well Tests

Type	Yield (gpm)	Drawdown/Stemset	Hours	Measured By	Measured Date
Bailer	4	25	1		

Well Log

Material	Top	Bottom
brown clay. sand, & gravel	0	8
brown sand, clay & gravel	8	18
tan sand	18	41
gray silt, sand, & clay	41	55
silt & sand	55	62
sand & water	62	71
silt, sand, & water	71	

Driller

Contractor	Last Name	First Name	License
Hayes	Hayes	Hilton	

Skagit County Well Report

ATTACHMENT C

Laboratory Analytical Reports

Burlington, WA *Corporate Laboratory (a)*
1620 S Walnut St - Burlington, WA 98233 - **800.755.9295** • 360.757.1400

Bellingham, WA *Microbiology (b)*
805 Orchard Dr Ste 4 - Bellingham, WA 98225 - 360.715.1212

Portland, OR *Microbiology/Chemistry (c)*
9725 SW Commerce Cr Ste A2 - Wilsonville, OR 97070 - 503.682.7802

Corvallis, OR *Microbiology/Chemistry (d)*
1100 NE Circle Blvd, Ste 130 - Corvallis, OR 97330 - 541.753.4946

Bend, OR *Microbiology (e)*
20332 Empire Blvd Ste 4 - Bend, OR 97701 - 541.639.8425

January 31, 2024

Ryan Mullen
Aspect Consulting LLC
350 Madison Avenue North
Bainbridge Island, WA 98110

RE: 24-00340 - Lake Erie GW Testing

Dear Ryan Mullen,

Your project: Lake Erie GW Testing, was received on Thursday January 04, 2024.

All samples were analyzed within the accepted holding times and were appropriately preserved and analyzed according to approved analytical protocols, unless noted in the data or QC reports. The quality control data was within laboratory acceptance limits, unless specified in the data or QC reports.

If you have questions phone us at 800 755-9295.

Respectfully

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

Enclosures: Data Report
QC Reports
Chain of Custody

Burlington, WA *Corporate Laboratory (a)*
1620 S Walnut St - Burlington, WA 98233 - **800.755.9295** • 360.757.1400
Bellingham, WA *Microbiology (b)*
805 Orchard Dr Ste 4 - Bellingham, WA 98225 - 360.715.1212
Portland, OR *Microbiology/Chemistry (c)*
9725 SW Commerce Cr Ste A2 - Wilsonville, OR 97070 - 503.682.7802
Corvallis, OR *Microbiology/Chemistry (d)*
1100 NE Circle Blvd, Ste 130 - Corvallis, OR 97330 - 541.753.4946
Bend, OR *Microbiology (e)*
20332 Empire Blvd Ste 4 - Bend, OR 97701 - 541.639.8425

Data Report

Client Name: Aspect Consulting LLC
350 Madison Avenue North
Bainbridge Island, WA 98110

Reference Number: **24-00340**
Project: Lake Erie GW Testing

Report Date: 1/31/24

Date Received: 1/4/24
Approved by: anp,bj,jwn,tjb
Authorized by:

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

Sample Description: S08 Spring 1 Matrix W Sample Date: 1/4/24 11:30 am
Lab Number: 609 Sample Comment: Collected By: Ryan Mullen

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7439-96-5	**MANGANESE**	0.114	0.001	0.0002	mg/L	1.0	200.7	a	1/26/24	BJ	200.7_240126A5	
7439-89-6	**IRON**	0.74	0.050	0.003	mg/L	1.0	200.7/TR	a	1/15/24	BJ	200.7_240115B5	
7440-70-2	**CALCIUM**	22.0	0.5	0.008	mg/L	1.0	200.7/TR	a	1/15/24	BJ	200.7_240115B5	
7439-95-4	**MAGNESIUM**	17.9	0.5	0.01	mg/L	1.0	200.7/TR	a	1/15/24	BJ	200.7_240115B5	
7440-09-7	**POTASSIUM**	3.4	0.5	0.1	mg/L	1.0	200.7/TR	a	1/15/24	BJ	200.7_240115B5	
7440-23-5	**SODIUM**	23.0	0.5	0.1	mg/L	1.0	200.7/TR	a	1/15/24	BJ	200.7_240115B5	
16887-00-6	**CHLORIDE**	26.6	0.1	0.0239	mg/L	1.0	300.0	a	1/4/24	SPM2	IC05_240104A	
16984-48-8	**FLUORIDE**	0.11	0.1	0.0291	mg/L	1.0	300.0	a	1/4/24	SPM2	IC05_240104A	
14808-79-8	**SULFATE**	19.7	0.2	0.0359	mg/L	1.0	300.0	a	1/4/24	SPM2	IC05_240104A	
14797-55-8	**NITRATE-N**	1.43	0.100	0.0077	mg/L	1.0	300.0	a	1/4/24	SPM2	IC05_240104A	
14797-65-0	**NITRITE-N**	ND	0.10	0.0316	mg/L	1.0	300.0	a	1/4/24	SPM2	IC05_240104A	
7664-41-7	**AMMONIA-N**	0.027	0.010	0.0045	mg/L	1.0	350.1	a	1/15/24	MSO	350.1_240115	
NA	**BICARBONATE**	127	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**CARBONATE**	ND	5.00		mgCaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**HYDROXIDE**	ND	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-14506	**ALKALINITY**	127	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-10173	**TOTAL DISSOLVED SOLIDS (TDS)**	218	10		mg/L	1.0	SM2540 C	a	1/18/24	JER	TDS_240110	
7723-14-0	**TOTAL PHOSPHORUS-P**	0.088	0.010	0.0019	mg/L	1.0	SM4500-P F/SM4500-P B(5)	a	1/10/24	TJL	TPHOS_240110	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor

If you have any questions concerning this report contact us at the above phone number.

Form: cRslt_2.rpt

EDGE ANALYTICAL

Reference Number: **24-00340**
Report Date: 1/31/24

Data Report

Sample Description: S09 Spring 2 | Matrix W | Sample Date: 1/4/24 11:45 am
Lab Number: 610 | Sample Comment: | Collected By: Ryan Mullen

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7439-96-5	**MANGANESE**	0.0554	0.001	0.0002	mg/L	1.0	200.7	a	1/26/24	BJ	200.7_240126A5	
7439-89-6	**IRON**	0.31	0.050	0.003	mg/L	1.0	200.7/TR	a	1/15/24	BJ	200.7_240115B5	
7440-70-2	**CALCIUM**	28.7	0.5	0.008	mg/L	1.0	200.7/TR	a	1/15/24	BJ	200.7_240115B5	
7439-95-4	**MAGNESIUM**	25.8	0.5	0.01	mg/L	1.0	200.7/TR	a	1/15/24	BJ	200.7_240115B5	
7440-09-7	**POTASSIUM**	2.3	0.5	0.1	mg/L	1.0	200.7/TR	a	1/15/24	BJ	200.7_240115B5	
7440-23-5	**SODIUM**	22.9	0.5	0.1	mg/L	1.0	200.7/TR	a	1/15/24	BJ	200.7_240115B5	
16887-00-6	**CHLORIDE**	30.5	0.1	0.0239	mg/L	1.0	300.0	a	1/4/24	SPM2	IC05_240104A	
16984-48-8	**FLUORIDE**	0.11	0.1	0.0291	mg/L	1.0	300.0	a	1/4/24	SPM2	IC05_240104A	
14808-79-8	**SULFATE**	18.4	0.2	0.0359	mg/L	1.0	300.0	a	1/4/24	SPM2	IC05_240104A	
14797-55-8	**NITRATE-N**	5.55	0.100	0.0077	mg/L	1.0	300.0	a	1/4/24	SPM2	IC05_240104A	
14797-65-0	**NITRITE-N**	ND	0.10	0.0316	mg/L	1.0	300.0	a	1/4/24	SPM2	IC05_240104A	
7664-41-7	**AMMONIA-N**	0.012	0.010	0.0045	mg/L	1.0	350.1	a	1/15/24	MSO	350.1_240115	
NA	**BICARBONATE**	166	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**CARBONATE**	ND	5.00		mgCaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**HYDROXIDE**	ND	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-14506	**ALKALINITY**	166	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-10173	**TOTAL DISSOLVED SOLIDS (TDS)**	263	10		mg/L	1.0	SM2540 C	a	1/18/24	JER	TDS_240110	
7723-14-0	**TOTAL PHOSPHORUS-P**	0.070	0.010	0.0019	mg/L	1.0	SM4500-P F/SM4500-P B(5)	a	1/10/24	TJL	TPHOS_240110	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor

SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Reference Number: **24-00340**
Report Date: 01/31/24

Batch		Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier	QC Type	Comment
Calibration Check											
200.7_240115B5	2	IRON	1.01	1	mg/L	200.7	101	90-110		CAL	
	2	CALCIUM	11.5	11	mg/L	200.7	105	90-110		CAL	
	2	MAGNESIUM	11.1	11	mg/L	200.7	101	90-110		CAL	
	2	POTASSIUM	10.1	10	mg/L	200.7	101	90-110		CAL	
	2	SODIUM	11.4	11	mg/L	200.7	104	90-110		CAL	
200.7_240126A5	2	MANGANESE	1.05	1	mg/L	200.7	105	90-110		CAL	
350.1_240115	0	AMMONIA-N	2.36	2.50	mg/L	350.1	94	90-110		CAL	
IC05_240104A	0	CHLORIDE	0.9	1	mg/L	300.0	90	90-110		CAL	
	0	SULFATE	1.8	2	mg/L	300.0	90	90-110		CAL	
	0	NITRATE-N	1.00	1	mg/L	300.0	100	90-110		CAL	
	0	NITRITE-N	0.92	1	mg/L	300.0	92	90-110		CAL	
	0	FLUORIDE	0.95	1	mg/L	300.0	95	90-110		CAL	
TPHOS_240110	0	TOTAL PHOSPHORUS-P	0.098	0.100	mg/L	SM4500-P F	98	85-115		CAL	
Laboratory Fortified Blank											
200.7_240115B5	2	IRON	0.258	0.25	mg/L	200.7	103	85-115		LFB	
	2	CALCIUM	7.1	6.5	mg/L	200.7	109	85-115		LFB	
	2	MAGNESIUM	6.5	6.5	mg/L	200.7	100	85-115		LFB	
	2	POTASSIUM	8.8	8.75	mg/L	200.7	101	85-115		LFB	
	2	SODIUM	6.6	6.5	mg/L	200.7	102	85-115		LFB	
200.7_240126A5	1	MANGANESE	0.492	0.5	mg/L	200.7	98	85-115		LFB	
ALK_240105	0	ALKALINITY	99.2	100	mg CaCO3/l	SM2320 B	99	90-110		LFB	
Laboratory Reagent Blank											
200.7_240115B5	0	IRON	ND		mg/L	200.7		0-0		LRB	
	0	CALCIUM	ND		mg/L	200.7		0-0		LRB	
	0	MAGNESIUM	ND		mg/L	200.7		0-0		LRB	
	0	POTASSIUM	ND		mg/L	200.7		0-0		LRB	
	0	SODIUM	ND		mg/L	200.7		0-0		LRB	
200.7_240126A5	0	MANGANESE	ND		mg/L	200.7		0-0		LRB	
ALK_240105	0	ALKALINITY	ND		mg CaCO3/l	SM2320 B		0-1		LRB	
	1	ALKALINITY	ND		mg CaCO3/l	SM2320 B		0-1		LRB	
IC05_240104A	0	CHLORIDE	ND		mg/L	300.0		0-0		LRB	
	0	SULFATE	ND		mg/L	300.0		0-0		LRB	
	0	NITRATE-N	ND		mg/L	300.0		0-0		LRB	
	0	NITRITE-N	ND		mg/L	300.0		0-0		LRB	
	0	FLUORIDE	ND		mg/L	300.0		0-0		LRB	
TPHOS_240110	0	TOTAL PHOSPHORUS-P	ND		mg/L	SM4500-P F		0-0		LRB	

*Notation:
% Recovery = (Result of Analysis)/(True Value) * 100
NA = Indicates % Recovery could not be calculated.
Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Reference Number: **24-00340**
Report Date: 01/31/24

Batch		Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier	QC Type	Comment
Method Blank											
200.7_240115B5	0	IRON	ND		mg/L	200.7		0-0		MB	
	0	CALCIUM	ND		mg/L	200.7		0-0		MB	
	0	MAGNESIUM	ND		mg/L	200.7		0-0		MB	
	0	POTASSIUM	ND		mg/L	200.7		0-0		MB	
	0	SODIUM	ND		mg/L	200.7		0-0		MB	
200.7_240126A5	0	MANGANESE	ND		mg/L	200.7		0-0		MB	
350.1_240115	0	AMMONIA-N	ND		mg/L	350.1		0-0		MB	
TDS_240110	0	TOTAL DISSOLVED SOLIDS (TDS)	ND		mg/L	SM2540 C		0-3		MB	
	1	TOTAL DISSOLVED SOLIDS (TDS)	ND		mg/L	SM2540 C		0-3		MB	
TPHOS_240110	0	TOTAL PHOSPHORUS-P	ND		mg/L	SM4500-P F		0-0		MB	
Quality Control Sample											
200.7_240115B5	0	IRON	1.98	2	mg/L	200.7	99	95-105		QCS	
	1	CALCIUM	20.6	20	mg/L	200.7	103	95-105		QCS	
	1	MAGNESIUM	19.3	20	mg/L	200.7	97	95-105		QCS	
	1	POTASSIUM	19.8	20	mg/L	200.7	99	95-105		QCS	
	1	SODIUM	20.5	20	mg/L	200.7	103	95-105		QCS	
200.7_240126A5	0	MANGANESE	2.02	2	mg/L	200.7	101	95-105		QCS	
350.1_240115	0	AMMONIA-N	2.25	2.15	mg/L	350.1	105	85-115		QCS	
ALK_240105	0	ALKALINITY	99.8	100	mg CaCO3/L	SM2320 B	100	90-110		QCS	
IC05_240104A	0	CHLORIDE	6.6	6	mg/L	300.0	110	90-110		QCS	
	0	SULFATE	33.0	30	mg/L	300.0	110	90-110		QCS	
	0	NITRATE-N	6.44	6	mg/L	300.0	107	90-110		QCS	
	0	NITRITE-N	6.15	6	mg/L	300.0	103	90-110		QCS	
	0	FLUORIDE	4.07	4	mg/L	300.0	102	90-110		QCS	
TDS_240110	0	TOTAL DISSOLVED SOLIDS (TDS)	498	500	mg/L	SM2540 C	100	80-120		QCS	
	0	TOTAL DISSOLVED SOLIDS (TDS)	502	500	mg/L	SM2540 C	100	80-120		QCS	
TPHOS_240110	0	TOTAL PHOSPHORUS-P	0.199	0.217	mg/L	SM4500-P F	92	90-110		QCS	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QCIndependent4.rpt

EDGE ANALYTICAL

SAMPLE DEPENDENT QUALITY CONTROL REPORT

Duplicate, Matrix Spike/Matrix Spike Duplicate and Confirmation Result Report

Reference Number: **24-00340**
Report Date: 1/31/2024

Duplicate

Batch/CAS	Sample	Analyte	Result	Duplicate Result	Units	%RPD	Limits	QC Qualifier	Comments
200.7_240115B5									
7439-89-6	569	IRON	0.15	0.15	mg/L	**0.0**	0-20		
200.7_240126A5									
7439-96-5	3161	MANGANESE	0.218	0.215	mg/L	**1.4**	0-20		
7439-96-5	3249	MANGANESE	0.0948	0.0954	mg/L	**0.6**	0-20		
350.1_240115									
7664-41-7	283	AMMONIA-N	31.8	29.3	mg/L	**8.2**	0-20		
7664-41-7	374	AMMONIA-N	0.59	0.54	mg/L	**8.8**	0-20		
7664-41-7	1770	AMMONIA-N	13.1	11.6	mg/L	**12.1**	0-20		
ALK_240105									
E-14506	78826	ALKALINITY	127	127	mg CaCO3/L	**0.0**	0-20		
IC05_240104A									
14797-55-8	461	NITRATE-N	8.04	8.05	mg/L	**0.1**	0-20		
14797-65-0	588	NITRITE-N	ND	ND	mg/L	**NA**	0-20		
16984-48-8	588	FLUORIDE	ND	ND	mg/L	**NA**	0-20		
14797-55-8	588	NITRATE-N	ND	ND	mg/L	**NA**	0-20		
TDS_240110									
E-10173	610	TOTAL DISSOLVED SOLIDS (TDS)	263	260	mg/L	**1.1**	0-5		
E-10173	951	TOTAL DISSOLVED SOLIDS (TDS)	376	448	mg/L	**17.5**	0-5		
E-10173	1018	TOTAL DISSOLVED SOLIDS (TDS)	97	98	mg/L	**1.0**	0-5		
E-10173	71451	TOTAL DISSOLVED SOLIDS (TDS)	88	92	mg/L	**4.4**	0-5		
TPHOS_240110									
7723-14-0	368	TOTAL PHOSPHORUS-P	0.076	0.079	mg/L	**3.9**	0-20		
7723-14-0	369	TOTAL PHOSPHORUS-P	0.157	0.157	mg/L	**0.0**	0-20		
7723-14-0	371	TOTAL PHOSPHORUS-P	0.020	0.020	mg/L	**0.0**	0-20		

%RPD = Relative Percent Difference

NA = Indicates %RPD could not be calculated

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) analyses are used to determine the accuracy (MS) and precision (MSD) of a analytical method in a given sample matrix. Therefore, the usefulness of this report is limited to samples of similar matrices analyzed in the same analytical batch.

Only Duplicate sample with detections are listed in this report

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

EDGE ANALYTICAL

SAMPLE DEPENDENT QUALITY CONTROL REPORT

Duplicate, Matrix Spike/Matrix Spike Duplicate and Confirmation Result Report

Reference Number: **24-00340**
Report Date: 1/31/2024

Laboratory Fortified Matrix (MS)

Batch/CAS	Sample	Analyte	Result	Spike Result	Duplicate Spike Result	Conc	Units	Percent Recovery MS	Percent Recovery MSD	Limits*	%RPD	Limits*	QC Qualifier	Comments
200.7_240115B5														
7439-89-6	569	IRON	0.15	0.40		0.25	mg/L	**100**		70-130	**NA**	0-20		
200.7_240126A5														
7439-96-5	3161	MANGANESE	0.218	0.704	0.688	0.50	mg/L	**97**	**94**	70-130	**3.3**	0-20		
7439-96-5	3249	MANGANESE	0.0948	0.596	0.623	0.50	mg/L	**100**	**106**	70-130	**5.2**	0-20		
350.1_240115														
7664-41-7	283	AMMONIA-N	31.8	84.5	86.8	50.0	mg/L	**105**	**110**	70-130	**4.3**	0-20		
7664-41-7	374	AMMONIA-N	0.59	1.67	1.66	1.00	mg/L	**108**	**107**	70-130	**0.9**	0-20		
7664-41-7	1770	AMMONIA-N	13.1	61.7	68.5	50.0	mg/L	**97**	**111**	70-130	**13.1**	0-20		
IC05_240104A														
14797-55-8	461	NITRATE-N	8.04	8.84		1	mg/L	**80**		90-110	**NA**	0-20	IS	
14797-65-0	588	NITRITE-N	ND	0.92		1	mg/L	**92**		90-110	**NA**	0-20		
16984-48-8	588	FLUORIDE	ND	0.98		1	mg/L	**98**		90-110	**NA**	0-20		
14797-55-8	588	NITRATE-N	ND	1.03		1	mg/L	**103**		90-110	**NA**	0-20		
TPHOS_240110														
7723-14-0	368	TOTAL PHOSPHORUS-P	0.076	0.126	0.131	0.050	mg/L	**100**	**110**	70-130	**9.5**	0-20		
7723-14-0	369	TOTAL PHOSPHORUS-P	0.157	0.192	0.200	0.050	mg/L	**70**	**86**	70-130	**20.5**	0-20		
7723-14-0	371	TOTAL PHOSPHORUS-P	0.020	0.071	0.074	0.050	mg/L	**102**	**108**	70-130	**5.7**	0-20		

%RPD = Relative Percent Difference

NA = Indicates %RPD could not be calculated

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) analyses are used to determine the accuracy (MS) and precision (MSD) of a analytical method in a given sample matrix. Therefore, the usefulness of this report is limited to samples of similar matrices analyzed in the same analytical batch.

Only Duplicate sample with detections are listed in this report

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

Qualifier Definitions

Reference Number: 24-00340
Report Date: 01/31/24

Qualifier	Definition
IS	The ratio of the spike concentration to sample background was too low to meet performance criteria

Note: Some qualifier definitions found on this page may pertain to results or QC data which are not printed with this report.

Chain of Custody / Analysis Request (Please complete all applicable shaded sections)

Page_____ of_____

Report to: Aspect Consulting, LLC	Bill to: William Wooding
Ship Address: 350 Madison Ave North	Address: 13540 Rosario Rd
City: Bainbridge Is St: WA Zip: 98110	City: Anacortes St: WA Zip: 98221
Attn: Ryan Mullen	Phone: (360) 708-8559 FAX:
Phone: (425) 749-9429 FAX:	P.O.#: Attn:
Email: ryan.mullen@aspectconsulting.com	
Project Lake Erie GW Testing	

24-00340
609 - 610

Check Regulatory Program
- ☐ Safe Drinking Water Act
- ☐ Clean Water Act
- ☐ RCRA / CERCLA
- ☐ Other

EDGE ANALYTICAL
Main Lab (800-755-9295)
1620 South Walnut St Burlington, WA 98233
Microbiology (888-725-1212)
805 W. Orchard Dr. Suite 4 Bellingham, WA 98225
Wilsonville Lab (503-682-7802)
9725 SW Commerce Cir. Ste A2 Wilsonville, OR 97070
Corvallis Lab (541-753-4946)
1100 NE Circle Blvd, Ste 130, Corvallis, OR 97330
Bend Lab (541-639-8425)
20332 Empire Ave Ste F4, Bend, OR 97703

1. Use one line per sample Location.
2. Be specific in analysis requests.
3. List each metal individually
4. Check off analyses to be performed for each sample Location.
5. Enter number of containers.
6. ***(NEW)*** Report to __ MDL or __ PQL ***(NEW)***

Turn Around Time Required
- ☒ Standard
- ☐ Half-time (50% surcharge)
- ☐ Quickest (100% surcharge) Phone Call Req.
- ☐ Emergency (Phone Call Req.)

Analyses Requested

	Field ID	Location	Grab/ Comp.	Sample Matrix*	Date	Time	CO3/HCO3/OH/ALK	Fe, Mn, K, Mg, Na, Ca	NO2, NO3, F, Chloride, SO4, TDS	Total PHOS, Ammonia					Number of Containers
1	SO8	SPRING 1	X		1-4-24	1:30	☐	☐	☐	☐	☐	☐	☐	☐	4
2	SO9	SPRING 2	X		1-4-24	11:45	☐	☐	☐	☐	☐	☐	☐	☐	4
3							☐	☐	☐	☐	☐	☐	☐	☐	
4							☐	☐	☐	☐	☐	☐	☐	☐	
5							☐	☐	☐	☐	☐	☐	☐	☐	
6							☐	☐	☐	☐	☐	☐	☐	☐	
7							☐	☐	☐	☐	☐	☐	☐	☐	
8							☐	☐	☐	☐	☐	☐	☐	☐	
9							☐	☐	☐	☐	☐	☐	☐	☐	

CO000000

Special Instructions
Conditions on Receipt

****Are there known hazardous or dangerous wastes in these samples? YES / NO If YES, indicate type on reverse of this form; samples may be returned to you.**

8 Total Containers

Sampled by: Ryan Mullen Phone: (425) 749-9429 FAX: Email: Ryan.Mullen@aspectconsulting.com

Sample Receipt Request (Must include FAX or Email) ☐

* **W** - water **SW** - surface water **WW** - waste water **SL** - salt water
DW - drinking water **ST** - storm water **S** - soil **OL** - oil Other:

****Relinquished by**	Date	Time	Received by	Date	Time
			MSCWIREC8	1-4-24	1243

	Yes	No	N/A
Custody seals intact	☐	☐	☑
Sample temp 8.7 C satisfactory	☐	☐	☐
Samples received intact	☐	☐	
Chain of custody & labels agree	☐	☐	

FORM: COC 6-27-2018

Burlington, WA *Corporate Laboratory (a)*
1620 S Walnut St - Burlington, WA 98233 - **800.755.9295** • 360.757.1400
Bellingham, WA *Microbiology (b)*
805 Orchard Dr Ste 4 - Bellingham, WA 98225 - 360.715.1212
Portland, OR *Microbiology/Chemistry (c)*
9725 SW Commerce Cr Ste A2 - Wilsonville, OR 97070 - 503.682.7802
Corvallis, OR *Microbiology/Chemistry (d)*
1100 NE Circle Blvd, Ste 130 - Corvallis, OR 97330 - 541.753.4946
Bend, OR *Microbiology (e)*
20332 Empire Blvd Ste 4 - Bend, OR 97701 - 541.639.8425

Data Report

Client Name: Aspect Consulting, LLC
350 Madison Avenue North
Bainbridge Isl, WA 98110

Reference Number: **24-00239**
Project: Ground Water Testing

Report Date: 1/16/24

Date Received: 1/3/24
Approved by: anp,bj,jwn,tjb
Authorized by:

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

Sample Description: SO1 13507 Rossario Rd — Matrix W — Sample Date: 1/3/24 9:20 am
Lab Number: 368 — Sample Comment: — Collected By: Ryan Mullen

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7440-70-2	**CALCIUM**	27.8	0.5	0.008	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-95-4	**MAGNESIUM**	16.9	0.5	0.01	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-96-5	**MANGANESE**	0.0371	0.001	0.001	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-89-6	**IRON**	0.63	0.050	0.003	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-09-7	**POTASSIUM**	2.8	0.5	0.1	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-23-5	**SODIUM**	14.3	0.5	0.1	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
16887-00-6	**CHLORIDE**	17.5	0.1	0.0239	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
16984-48-8	**FLUORIDE**	0.11	0.1	0.0291	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14808-79-8	**SULFATE**	12.2	0.2	0.0359	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-55-8	**NITRATE-N**	ND	0.100	0.0077	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-65-0	**NITRITE-N**	ND	0.10	0.0316	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
7664-41-7	**AMMONIA-N**	0.010	0.010	0.0045	mg/L	1.0	350.1	a	1/15/24	MSO	350.1_240115	
NA	**BICARBONATE**	154	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**CARBONATE**	ND	5.00		mgCaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**HYDROXIDE**	ND	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-14506	**ALKALINITY**	154	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-10173	**TOTAL DISSOLVED SOLIDS (TDS)**	205	10		mg/L	1.0	SM2540 C	a	1/9/24	MSO	TDS_240104	
7723-14-0	**TOTAL PHOSPHORUS-P**	0.076	0.010	0.0019	mg/L	1.0	SM4500-P F/SM4500-P B(5)	a	1/10/24	TJL	TPHOS_240110	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor

If you have any questions concerning this report contact us at the above phone number.

Form: cRslt_2.rpt

EDGE ANALYTICAL

Reference Number: **24-00239**
Report Date: 1/16/24

Data Report

Sample Description: SO2 13495 Rossario Rd | Matrix W | Sample Date: 1/3/24 9:30 am
Lab Number: 369 | Sample Comment: | Collected By: Ryan Mullen

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7440-70-2	**CALCIUM**	28.1	0.5	0.008	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-95-4	**MAGNESIUM**	17.2	0.5	0.01	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-96-5	**MANGANESE**	0.0298	0.001	0.001	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-89-6	**IRON**	1.08	0.050	0.003	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-09-7	**POTASSIUM**	2.9	0.5	0.1	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-23-5	**SODIUM**	14.8	0.5	0.1	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
16887-00-6	**CHLORIDE**	19.8	0.1	0.0239	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
16984-48-8	**FLUORIDE**	0.11	0.1	0.0291	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14808-79-8	**SULFATE**	18.7	0.2	0.0359	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-55-8	**NITRATE-N**	ND	0.100	0.0077	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-65-0	**NITRITE-N**	ND	0.10	0.0316	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
7664-41-7	**AMMONIA-N**	ND	0.010	0.0045	mg/L	1.0	350.1	a	1/15/24	MSO	350.1_240115	
NA	**BICARBONATE**	148	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**CARBONATE**	ND	5.00		mgCaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**HYDROXIDE**	ND	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-14506	**ALKALINITY**	148	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-10173	**TOTAL DISSOLVED SOLIDS (TDS)**	213	10		mg/L	1.0	SM2540 C	a	1/9/24	MSO	TDS_240104	
7723-14-0	**TOTAL PHOSPHORUS-P**	0.157	0.010	0.0019	mg/L	1.0	SM4500-P F/SM4500-P B(5)	a	1/10/24	TJL	TPHOS_240110	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor

EDGE ANALYTICAL

Reference Number: **24-00239**
Report Date: 1/16/24

Data Report

Sample Description: SO3 MW01 North Well — Matrix W — Sample Date: 1/3/24 10:20 am
Lab Number: 370 — Sample Comment: — Collected By: Ryan Mullen

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7440-70-2	**CALCIUM**	41.0	0.5	0.008	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-95-4	**MAGNESIUM**	18.1	0.5	0.01	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-96-5	**MANGANESE**	0.0180	0.001	0.001	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-89-6	**IRON**	0.40	0.050	.0003	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-09-7	**POTASSIUM**	2.6	0.5	0.1	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-23-5	**SODIUM**	14.6	0.5	0.1	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
16887-00-6	**CHLORIDE**	20.9	0.1	0.0239	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
16984-48-8	**FLUORIDE**	0.11	0.1	0.0291	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14808-79-8	**SULFATE**	10.5	0.2	0.0359	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-55-8	**NITRATE-N**	ND	0.100	0.0077	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-65-0	**NITRITE-N**	ND	0.10	0.0316	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
7664-41-7	**AMMONIA-N**	ND	0.010	0.0045	mg/L	1.0	350.1	a	1/15/24	MSO	350.1_240115	
NA	**BICARBONATE**	187	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**CARBONATE**	ND	5.00		mgCaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**HYDROXIDE**	ND	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-14506	**ALKALINITY**	187	5.00		mg CaCO3/L	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-10173	**TOTAL DISSOLVED SOLIDS (TDS)**	236	10		mg/L	1.0	SM2540 C	a	1/9/24	MSO	TDS_240104	
7723-14-0	**TOTAL PHOSPHORUS-P**	0.081	0.010	0.0019	mg/L	1.0	SM4500-P F/SM4500-P B(5)	a	1/10/24	TJL	TPHOS_240110	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor

EDGE ANALYTICAL

Reference Number: **24-00239**
Report Date: 1/16/24

Data Report

Sample Description: SO4 13114 S. Wildwood Ln | Matrix W | Sample Date: 1/3/24 10:40 am
Lab Number: 371 | Sample Comment: | Collected By: Ryan Mullen

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7440-70-2	**CALCIUM**	29.0	0.5	.0008	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-95-4	**MAGNESIUM**	19.3	0.5	0.01	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-96-5	**MANGANESE**	0.0198	0.001	0.001	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-89-6	**IRON**	0.006 J	0.050	0.003	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-09-7	**POTASSIUM**	2.5	0.5	0.1	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-23-5	**SODIUM**	15.5	0.5	0.1	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
16887-00-6	**CHLORIDE**	20.4	0.1	0.0239	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
16984-48-8	**FLUORIDE**	ND	0.1	0.0291	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14808-79-8	**SULFATE**	20.7	0.2	0.0359	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-55-8	**NITRATE-N**	ND	0.100	0.0077	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-65-0	**NITRITE-N**	ND	0.10	0.0316	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
7664-41-7	**AMMONIA-N**	ND	0.010	0.0045	**mg/L**	1.0	350.1	a	1/15/24	MSO	350.1_240115	
NA	**BICARBONATE**	150	5.00		**mg CaCO3/L**	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**CARBONATE**	ND	5.00		**mgCaCO3/L**	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**HYDROXIDE**	ND	5.00		**mg CaCO3/L**	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-14506	**ALKALINITY**	150	5.00		**mg CaCO3/L**	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-10173	**TOTAL DISSOLVED SOLIDS (TDS)**	222	10		**mg/L**	1.0	SM2540 C	a	1/9/24	MSO	TDS_240104	
7723-14-0	**TOTAL PHOSPHORUS-P**	0.020	0.010	0.0019	**mg/L**	1.0	SM4500-P F/SM4500-P B(5)	a	1/10/24	TJL	TPHOS_240110	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor

Reference Number: **24-00239**
Report Date: 1/16/24

Data Report

Sample Description: SO5 Wooding Shop | Matrix W | Sample Date: 1/3/24 10:50 am
Lab Number: 372 | Sample Comment: | Collected By: Ryan Mullen

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7440-70-2	**CALCIUM**	19.1	0.5	0.008	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-95-4	**MAGNESIUM**	8.0	0.5	0.01	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-96-5	**MANGANESE**	0.0344	0.001	0.001	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-89-6	**IRON**	1.62	0.050	0.003	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-09-7	**POTASSIUM**	2.1	0.5	0.1	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-23-5	**SODIUM**	13.8	0.5	0.1	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
16887-00-6	**CHLORIDE**	27.4	0.1	0.0239	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
16984-48-8	**FLUORIDE**	ND	0.1	0.0291	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14808-79-8	**SULFATE**	15.8	0.2	0.0359	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-55-8	**NITRATE-N**	0.19	0.100	0.0077	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-65-0	**NITRITE-N**	ND	0.10	0.0316	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
7664-41-7	**AMMONIA-N**	0.007 J	0.010	0.0045	**mg/L**	1.0	350.1	a	1/15/24	MSO	350.1_240115	
NA	**BICARBONATE**	56.2	2.00		**mg CaCO3/L**	2.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**CARBONATE**	ND	2.00		**mgCaCO3/L**	2.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**HYDROXIDE**	ND	2.00		**mg CaCO3/L**	2.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-14506	**ALKALINITY**	56.2	2.00		**mg CaCO3/L**	2.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-10173	**TOTAL DISSOLVED SOLIDS (TDS)**	189	10		**mg/L**	1.0	SM2540 C	a	1/9/24	MSO	TDS_240104	
7723-14-0	**TOTAL PHOSPHORUS-P**	0.034	0.010	0.0019	**mg/L**	1.0	SM4500-P F/SM4500-P B(5)	a	1/10/24	TJL	TPHOS_240110	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor

EDGE ANALYTICAL

Reference Number: **24-00239**
Report Date: 1/16/24

Data Report

Sample Description: SO6 MW02 South Well | Matrix W | Sample Date: 1/3/24 12:30 pm
Lab Number: 373 | Sample Comment: | Collected By: Ryan Mullen

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7440-70-2	**CALCIUM**	38.2	0.5	0.008	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-95-4	**MAGNESIUM**	20.8	0.5	0.01	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-96-5	**MANGANESE**	0.0622	0.001	0.001	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-89-6	**IRON**	3.20	0.050	0.003	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-09-7	**POTASSIUM**	1.9	0.5	0.1	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-23-5	**SODIUM**	18.1	0.5	0.1	**mg/L**	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
16887-00-6	**CHLORIDE**	25.4	0.1	0.0239	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
16984-48-8	**FLUORIDE**	0.10	0.1	0.0291	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14808-79-8	**SULFATE**	14.8	0.2	0.0359	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-55-8	**NITRATE-N**	3.34	0.100	0.0077	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-65-0	**NITRITE-N**	ND	0.10	0.0316	**mg/L**	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
7664-41-7	**AMMONIA-N**	0.016	0.010	0.0045	**mg/L**	1.0	350.1	a	1/15/24	MSO	350.1_240115	
NA	**BICARBONATE**	178	5.00		**mg CaCO3/L**	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**CARBONATE**	ND	5.00		**mgCaCO3/L**	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**HYDROXIDE**	ND	5.00		**mg CaCO3/L**	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-14506	**ALKALINITY**	178	5.00		**mg CaCO3/L**	5.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-10173	**TOTAL DISSOLVED SOLIDS (TDS)**	257	10		**mg/L**	1.0	SM2540 C	a	1/9/24	MSO	TDS_240104	
7723-14-0	**TOTAL PHOSPHORUS-P**	0.053	0.010	0.0019	**mg/L**	1.0	SM4500-P F/SM4500-P B(5)	a	1/10/24	TJL	TPHOS_240110	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor

Reference Number: **24-00239**
Report Date: 1/16/24

Data Report

Sample Description: SO7 MW03 East Well | Matrix W | Sample Date: 1/3/24 2:55 pm
Lab Number: 374 | Sample Comment: | Collected By: Ryan Mullen

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7440-70-2	**CALCIUM**	3.8	0.5	0.008	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-95-4	**MAGNESIUM**	0.9	0.5	0.01	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-96-5	**MANGANESE**	0.140	0.001	0.001	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7439-89-6	**IRON**	19.2	0.050	0.003	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-09-7	**POTASSIUM**	1.0	0.5	0.1	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
7440-23-5	**SODIUM**	11.3	0.5	0.1	mg/L	1.0	200.7/TR	a	1/10/24	BJ	200.7_240110B5	
16887-00-6	**CHLORIDE**	12.8	0.1	0.0239	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
16984-48-8	**FLUORIDE**	0.11	0.1	0.0291	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14808-79-8	**SULFATE**	0.5	0.2	0.0359	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-55-8	**NITRATE-N**	ND	0.100	0.0077	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
14797-65-0	**NITRITE-N**	ND	0.10	0.0316	mg/L	1.0	300.0	a	1/3/24	SPM2	IC05_240103A	
7664-41-7	**AMMONIA-N**	0.59	0.010	0.0045	mg/L	1.0	350.1	a	1/15/24	MSO	350.1_240115	
NA	**BICARBONATE**	ND	1.00		mg CaCO3/L	1.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**CARBONATE**	17.6	1.00		mgCaCO3/L	1.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
NA	**HYDROXIDE**	5.16	1.00		mg CaCO3/L	1.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-14506	**ALKALINITY**	22.8	1.00		mg CaCO3/L	1.0	SM2320 B	a	1/5/24	EBVP	ALK_240105	
E-10173	**TOTAL DISSOLVED SOLIDS (TDS)**	38	10		mg/L	1.0	SM2540 C	a	1/9/24	MSO	TDS_240104	
7723-14-0	**TOTAL PHOSPHORUS-P**	0.026	0.010	0.0019	mg/L	1.0	SM4500-P F/SM4500-P B(5)	a	1/10/24	TJL	TPHOS_240110	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor

EXHIBIT #51

FACET PEER REVIEW/THIRD-PARTY REVIEW, DATED: APRIL 1, 2024

FACET

04/01/2024

Memo/Report

TO: Kevin Cricchio, Senior Planner
Skagit County Planning and Development Services

FROM: Alan Wald, Hydrogeologist
Facet, Inc.

RE: Lake Erie Pit Groundwater Evaluation.

As per your request of 03/01/2024, following is our review of the accuracy and completeness of Lake Erie Pit Groundwater Evaluation by Northwest Groundwater Consultants LLC (NWGC report) dated 02/29/24. The report was submitted by order of the Board of County Commissioners/Hearing Examiner (BOCC/HE) remand of 10/6/23. The NWGC report is supplemental to the Geologic Hazard Site Assessment (Wood, 2022) and Hydrologic Site Assessment Report (MFA, 2016).

Unless otherwise noted, all reference below to figures and tables are from the NWGC Report (2024).

Aquifer Properties, including groundwater levels, gradients, and direction of flow. The NWGC report describes surface soils, local geology, subsurface lithology and water bearing strata in the existing Lake Erie Pit site and proposed expansion area based on available technical reports. These include USDA soil descriptions, published geologic maps, surveyed elevations, mapped topographic data, published well logs, and drilling logs for two observation wells (MW01, MW02). Although there are some minor discrepancies in areal extent of specific soil types and some details in the geologic material descriptions, i.e. comparing well logs to published geologic maps, they are not significant and do not affect the overall evaluation. Groundwater levels were measured following accepted protocols (Table 3) and groundwater flow characterized by standard methods (Figures 4, 5, and 6). We note that pumps installed in the four private wells were not operating at the time water level measurements were taken. The measurements assume that water levels in the well have recovered from any recent pumping. Given the high specific yield of sand and gravel aquifers and the low pumpage required for filling the pressure tank for a residential water supply, we believe this is a reasonable assumption. The observation well drilling logs and findings were in accordance with professional standards. We found no significant issues with using this information in the groundwater evaluation.

Water Quality Sampling, including lab analysis and water quality data. Water quality sampling from wells and springs followed accepted procedures and sample analysis was

according to agency guidelines and accredited laboratory methods (Table 3). We flagged some results from the East Well (S07) for concentrations outside the comparative range of other samples. Anomalous results for this well appear in Figure 2 (STIFF diagram) and Figure 3. There may be several reasons for these departures and the results do not have major bearing on other results. We found no significant issues with use of the water quality data in the groundwater evaluation.

Summary and Conclusions of the NWGC report.

The subject report provides a detailed characterization of the groundwater system in the mine area, based on distributed observation well logs, water level data, water quality sampling results, and cross-sections depicting relative groundwater levels and water bearing materials. The report makes the following conclusions:

1. Water quality sampling identified distinct differences in water types between the observation wells and the two identified springs in the coastal bluffs. These differences indicate groundwater in the mine area may not be hydrologically connected to the springs.

   Review and Comment: We note that Figure 5 (B to B' cross-section) shows groundwater levels in the mine area are significantly lower in elevation and unlikely to contribute seepage to Dodson Canyon Spring. Figure 4 (A to A' cross-section) shows groundwater generally flows away from North Spring, on a gradient of .0023 or 12 feet/mile. Low gradients are characteristic of water bearing strata with high rates of hydraulic conductivity. The direction and rate of groundwater flow and difference in water types support the conclusion that groundwater in the mine area is unlikely to contribute seepage to North Spring.

2. Groundwater in the central and east portions of the mine area generally flows to the northeast and smaller components flow to the north and northwest.

   Review and Comment: We note that groundwater flow from the mine would be expected to follow topographical and geologic controls (shown in Figure 1, Site Vicinity) draining north to northeast, downslope to Lake Erie, to Lake Campbell, then discharging into Skagit Bay.

3. The premise that the proposed mine may increase groundwater flow to the west, is not substantiated due to the absence of glacial till in the west portion of the site, and the lack of shallow groundwater in intervening strata.

Review and Comment: It is our conclusion that the NWGC report provides the additional physical investigation and analysis necessary to assess the general direction of groundwater flow, which is north/northeast, with no obvious hydrologic continuity with seepage from the springs.

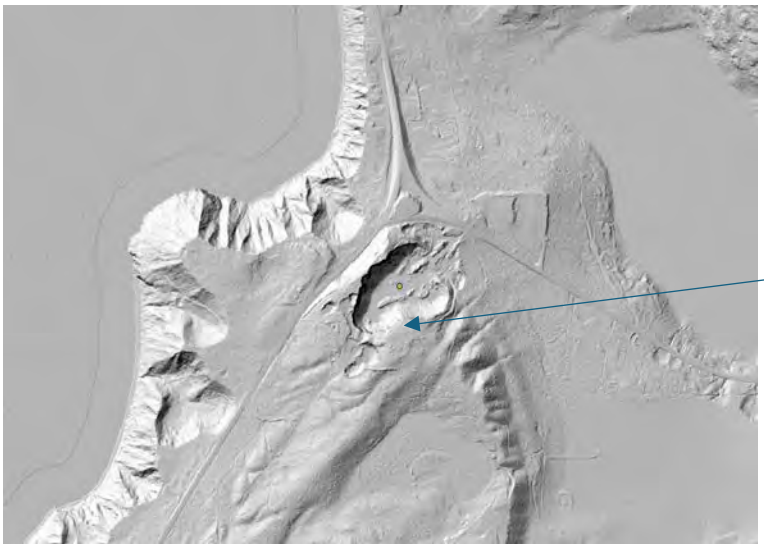
Skagit County Code14.24.400-.420, including requirements of the BOCC remand and supplemental review. The BOCC Resolution #R20230197 and order of the Hearing Examiner require additional analysis for the Geologic Hazard Site Assessment (GHSA) pertaining to potential mining impacts and requirements of SCC 14.24.420, particularly SCC 14.24.420 (e) estimating coastal bluff retreat rates and (f) assessment of coastal bluff stability.

The NWGC report identifies the coastal bluffs west of Rosario Road. It compares water quality test results, groundwater level data, and geologic materials in the area for potential groundwater continuity from the mine to North Spring and Dobson Spring. The report concludes that hydrologic connection between the mine and springs, based on differences in groundwater chemistry and the prevailing direction of groundwater flow, may not exist.

The report does not specifically address bluff retreat rates and slope stability. It does conclude that mining would not contribute to increased seepage from the springs, which implies there would be no cause and effect change in bluff retreat rates or bluff stability.

We note that residents on the coastal bluffs west of the proposed mine certainly are concerned about potential increases in bluff retreat rates and changes in bluff stability. Coastal bluffs from Biz Point to beyond Edith Point are mapped as geologically hazardous areas for good reason. The bluffs have been receding continuously for 6,000 years, retreating landward more than 740 feet since the increase in sea level following continental glaciation (Keuler, 1979). As shown in the LiDAR image (below), the coastal bluff landform includes steep slopes (some greater than 30%), high bluffs (greater than 300 ft), and numerous landslides resulting from coastal erosion and slope failures.

Most of the large slides visible in this image are more than 1,000 years old (Keuler, 1979). The small slides are typically non-hazardous slope readjustments due to local slumps, soil creep, and surface erosion. The estimated long-term bluff retreat rate is on the order of 2 to 4 cm/yr for 40 years prior to 1988 (Keuler, 1988). The area between Biz Point and Edith Point had 3 to 7 major slope failures in 20 years prior to 1988 (ibid).



WDNR. LiDAR Hillshade. bare earth. Washington Geologic Information Portal. https://geologyportal.dnr.wa.gov/2d-view#wigm

We note that coastal bluffs west of the mine are naturally unstable due to steep slopes, unconsolidated glacial material, permeable strata over silt and clay layers, and added groundwater recharge from housing development. These natural hazards are mitigated to some extent by methods that observe necessary setbacks, protect native vegetation, reduce impervious surfaces, and reduce onsite water use.

We note that the additional groundwater investigation and analyses presented in the NWGC report supports the conclusion that the risk of increased groundwater flow towards the springs is very small. Based on detailed information available in the studies to date, less than 10% of the mine area could contribute any additional flow towards the bluffs. It appears that any increase in groundwater flow towards the bluffs would originate in the western portions of parcels P19108, P19162, P19155, and P19158, shown in the Skagit County iMAP (below) and NWGC report, Figure 7.

https://skagitcounty.net/Maps/iMap/?mapid=a6cf480ed7fa449bac7dc6086ecfdf49

A possible mitigation measure to reduce the small risk even further would be to increase the buffer width from the current 50 feet to 100 feet along the western boundary of these parcels. The remaining mining area clearly drains away from the bluffs and towards Lake Erie.

It is our professional opinion that the proposed Lake Erie Pit project, with increased buffer widths in these parcels, and as approved with conditions by the Hearings Examiner, would not increase groundwater flow to Dodson and North Springs or increase bluff retreat rates and instability of the coastal bluffs. We believe the NWGC report meets the requirement for assessment of potential impacts on bluff retreat rates and slope stability required under SCC14.24.420 and the BOCC/HE remand. The suggested mitigation measure is for consideration.

References.

Keuler, R.F. Coastal zone processes and geomorphology of Skagit County, Washington. Master's thesis, Western Washington University, Bellingham, WA. 123 p. 1979

Keuler, R. F., Map showing coastal erosion, sediment supply, and longshore transport in the Port Townsend 30- by 60-minute quadrangle, Puget Sound Region, Washington, Miscellaneous Investigations Map 1198-E, United States Geological Survey. 1988

Maul Foster & Alongi, Inc. (Maul Foster). 2016. Hydrogeologic Site Assessment Report, Lake Erie Pit Expansion. 2016

Shipman, H. A Geomorphic Classification of Puget Sound Nearshore Landforms. Puget Sound Nearshore Partnership Report No. 2008-01. Published by Seattle District, U.S. Army Corps of Engineers, Seattle, Washington. 2008. www.pugetsoundnearshore.org.

Shipman, H., MacLennan, A., and Johannessen, J. Puget Sound Feeder Bluffs: Coastal Erosion as a Sediment Source and its Implications for Shoreline Management. Shorelands and Environmental Assistance Program, Washington Department of Ecology, Olympia, WA. Publication #14-06-016. 2014

Shipman, H. Coastal Bluffs and Sea Cliffs on Puget Sound, Washington. In: M.A. Hampton and G.B. Griggs (eds.), Formation, Evolution, and Stability of Coastal Cliffs–Status and Trends, Professional Paper 1693. U.S. Geological Survey: 81-94. ND. https://apps.ecology.wa.gov/publications/UIPages/documents/0406029.pdf

Wood Environment & Infrastructure Solutions, Inc. Geologic Hazard Site Assessment Lake Erie Pit 1 Expansion Southeast corner of Rosario Road & Marine Drive. Kirkland, Washington. August 11, 2022

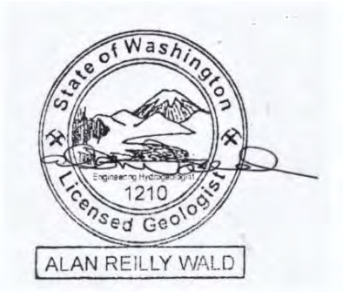


EXHIBIT #52

NOTICE OF PUBLIC HEARING

NOTICE OF PUBLIC HEARING

THE SKAGIT COUNTY HEARING EXAMINER WILL HOLD A PUBLIC HEARING ON **WEDNESDAY, MAY 08, 2024**, AT **9:00 AM** OR SOON THEREAFTER FOR THE FOLLOWING:

PUBLIC HEARING

Hearing to review the remanded items required by the Hearing Examiner on October 6, 2023, for Special Use Permit Application PL16-0556 submitted by Bill Wooding/Pit 1 LLC/Lake Erie Pit LLC, requesting the expansion of an existing gravel/sand mining operation from 17.78 acres to approximately 53.5 acres. Per the direction of the Hearing Examiner on remand, the applicant was required to prepare 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. Additional physical investigation and analysis was to be performed to assess the north/northwest 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 requested item(s) were submitted to Skagit County PDS on February 29, 2024, and determined complete on April 1, 2024, following a third-party review by Facet (DCG/Watershed Company). The subject site is located within the Rural Resource-Natural Resource Lands (RRc-NRL) Zoning/ Comprehensive Plan Designated Area and designated within the Mineral Resource Overlay.

LOCATION OF PROPOSED DEVELOPMENT:

The proposed mining expansion is located south of the intersection of Rosario Road and Marine Drive, FidaIgo Island, within a portion of Section 11, Township 34 North, Range 01 East, Willamette Meridian situated within unincorporated Skagit County, Washington. Subject Parcels: Existing Mine: P19108, P19162, & P19165; Expansion to Mine: P19158, P90028, P19164, P19155, P19161; Contiguous Parcels (Same Ownership): P19168, & P19163.

APPLICANT/ CONTACT:

Bill Wooding/Pit 1 LLC/Lake Erie Pit LLC
13540 Rosario Road
Anacortes, WA 98221

SKAGIT COUNTY PLANNING AND DEVELOPMENT SERVICES
1800 CONTINENTAL PLACE
MOUNT VERNON, WASHINGTON 98273
(360) 416-1320

Hearings are now being held hybrid, meaning in-person and virtual (via Zoom). To participate in the public hearing virtually you can call +1(253)215-8782, US (Tacoma), or +1(719)359-4580 US, **Meeting ID: 812 7077 5954# US (Passcode: 728120)**, or to join via video please visit: https://us06web.zoom.us/j/81270775954?pwd=YzdwSmxLeXp6cDdCbmFXK0ZSVWNRdz09

Log in information is also available on the Hearing Examiner website located at www.skagitcounty.net under the "*Department Directory,*" "Hearing Examiner."

If you would like to speak at the hearing, please contact either Kristen Stubben at (360) 416-1103, email kristens@co.skagit.wa.us or Russell Walker at (360) 416-1154, email russow@co.skagit.wa.us to sign up.

Your views for or against the requests are invited either by attendance, representation, or letter. Comments and/or facsimiles must be received by Planning and Development Services no later than **4:30 PM May 7, 2024**, or be presented at the public hearing. Email comments may be submitted with the PDS website under the current legal notices tab or to the Office of the Hearing Examiner. Staff contact: Kevin Cricchio, AICP, ISA, Senior Planner, (360) 416-1423.

EXHIBIT #53

2ND ADDENDUM TO STAFF REPORT, DATED: MAY 8, 2024

Planning & Development Services

1800 Continental Place ▪ Mount Vernon, Washington 98273
office 360-416-1320 ▪ pds@co.skagit.wa.us ▪ www.skagitcounty.net/planning

2nd ADDENDUM TO STAFF REPORT (EXHIBIT #53):

DATE: **MAY 8, 2024**

TO: **HEARING EXAMINER**

FROM: **KEVIN CRICCHIO, AICP, ISA, SENIOR PLANNER**

RE: **PUBLIC HEARING TO REVIEW THE REMANDED ITEMS REQUIRED BY THE HEARING EXAMINER ON OCTOBER 6, 2023, FOR EXPANSION TO LAKE ERIE SAND & GRAVEL MINE, SPECIAL USE PERMIT APPLICATION, PL16-0556**

SUBJECT PARCELS: EXISTING MINE: P19108, P19162, & P19165; EXPANSION TO MINE: P19158, P90028, P19164, P19155, P19161; CONTIGUOUS PARCELS (SAME OWNERSHIP): P19168, & P19163

LOCATION: **INTERSECTION OF ROSARIO ROAD & MARINE DRIVE, FIDALGO ISLAND; LOCATED IN A PORTION OF SECTION 11, TOWNSHIP 34 NORTH, RANGE 01 EAST, WILLAMETTE MERIDIAN**

Dear Mr. Hearing Examiner:

This is the second addendum (**Exhibit #53**) to the original staff report (dated August 26, 2020). The 1st addendum (**Exhibit #38**) to the original staff report was dated June 28, 2023.

This current addendum serves as both a chronology and update on the status of the Lake Erie Special Use Permit application, PL16-0556 that the applicant Bill Wooding/Lake Erie Pit LLC submitted to Skagit County's Planning and Development Services Department on December 2, 2016. The Special Use Permit application requests to expand an existing" gravel mine located on the subject parcel(s) from approximately 17.78 acres to approximately 53.5 acres in size.

Following a review of the application, Planning Department staff deemed the application complete on January 5, 2017. A Notice of Development Application (NODA) was published in the Skagit Valley Herald on February 2, 2017, mailed to neighboring landowners located within 300-feet of the subject parcel(s), and posted onsite as is required by Skagit County Code. The public comment period ended on February 17, 2017.

After the public comment period ended, additional information was requested of the applicant. After this material was submitted to Skagit County as was requested, a SEPA Mitigated Determination of Non-Significance (MDNS) was issued on December 3, 2018. The SEPA

comment period ended on December 21, 2018 and the appeal period ended on January 4, 2019. The SEPA MDNS was posted onsite, published in the Skagit Valley Herald and mailed/emailed to parties of record in accordance with Skagit County Code. No appeals were received.

A Notice of Public Hearing was published in the Skagit Valley Herald on August 6, 2020, posted onsite, and emailed/mailed to both neighboring properties within 300-feet of the subject parcel(s) and parties of record. Another Notice of Public Hearing advertising the continuation of the public hearing was published in the Skagit Valley Herald on September 24, 2020. This notice was also posted onsite, and emailed/mailed to both neighboring properties within 300-feet of the subject parcel(s) and parties of record.

The **Hearing Examiner** conducted an open-record public hearing on August 26, 2020, which was continued to October 14, 2020. The Hearing Examiner **approved** the subject Special Use Permit (**See Exhibit #24**) subject to conditions on November 30, 2020.

On appeal (**See Exhibit #25**), the **Board of County Commissioners remanded** (**See Exhibit #26**) the matter (**Resolution: R20210038**) to the Hearing Examiner to determine if a Geologically Hazardous Site Assessment is needed.

On March 9, 2021, the Hearing Examiner ordered Planning and Development Services (PDS) **(See Exhibit #27)** to direct Wooding to provide such an assessment. The Examiner determined that the appropriate course was to refer the matter to Planning and Development Services (PDS) with instructions to "direct the applicant to prepare a Geologically Hazardous Area Site Assessment consistent with Skagit County Code 14.24.200 – 14.24.420. On receipt of such assessment, PDS shall review it and provide an amended staff report to the Hearing Examiner containing the department's analysis and recommendations in light of the report. Thereafter, the Examiner shall schedule and hold a supplementary public hearing in this matter, limited to comment on the Geologically Hazardous Site Assessment. Following this hearing, based on the record made, the Examiner shall issue a decision imposing such additional conditions, if any, as may be necessary to mitigate risks that have been identified."

On March 23, 2021, a letter written by Skagit County Planning and Development Services Department (**See Exhibit #28**) requesting the applicant prepare a Geologically Hazardous Area Site Assessment and Geologically Hazardous Mitigation Area Plan consistent with Skagit County Code 14.24.420 and 14.24.430 respectively.

On May 27, 2021, another letter (**See Exhibit #28**) was written by Skagit County Planning and Development Services Department reiterating additional information was requested of the applicant on March 23, 2021, and that the deadline to provide this information was 4:30 PM on July 21, 2021. Failure to provide this information would result in the Special Use Permit being denied by Skagit County Planning and Development Services Department.
The 120-days provided by Skagit County Code 14.06.105 for submittal of the information expired on July 21, 2021. On July 20, 2021, the day before the expiration date, Wooding's agent

sent an email stating that a contract with a consultant had been entered and requesting a further extension of time for submitting the required information.

On July 21, 2021, Skagit County Planning and Development Services Department denied the extension request and denied the applicant's (Wooding's) Special Use Permit application (**See Exhibit #28**) for failure to timely supply the requested information.

The applicant appealed (**See Exhibit #29**) this decision by Skagit County PDS. On October 15, 2021, the Hearing Examiner granted the applicant's appeal of the county's decision thereby reversing it (**See Exhibit #30**). According to the Examiner's decision, the application shall remain in good standing through September 2022. During this time the applicant shall have a Geologically Hazardous Site Assessment prepared and shall submit the same prior to the end of September 2022.

On August 12, 2022, the applicant submitted a Geologic Hazard Site Assessment (**See Exhibit #31**) to Skagit County Planning and Development Services Department that was prepared by Wood Environmental and Infrastructure Solutions, Incorporated.

This Geologic Hazard Site Assessment (and subsequent letter from Evergreen Islands) [**See Exhibit #32]** dated November 18, 2022, was forwarded to the county's Third-Party Review consultant -the Watershed Company for review.

On January 19, 2023, the Watershed Company provided Skagit County PDS with their Third-Party Review findings and response to Evergreen Island's November 18, 2022, letter (**See Exhibit #33**).

On March 3, 2023, Skagit County Planning and Development Services Department received both an email and letter from Evergreen Islands along with a response letter from the Stratum Group (**See Exhibit #34**).

On March 31, 2023, Skagit County Planning and Development Services received a revised Third-Party Review and response to Evergreen Island letter dated November 18, 2022 (**See Exhibit #35**). It was revised per Skagit County PDS request for formatting and clarity reasons.

Since the required Geologic Hazard Site Assessment was complete along with the county's Third-Party Review, this matter went back to the Hearing Examiner. The purpose of the hearing was to review the **remanded item(s) required by the Hearing Examiner** on March 9, 2021, for Special Use Permit Application PL16-0556 submitted by the applicant.

A new Notice of Public Hearing (**See Exhibit #36**) was published in the Skagit Valley Herald on June 8, 2023, posted onsite, and mailed to neighboring landowners located within 300-feet of the subject parcels as is required by Skagit County Code. Additionally, the notice of record was both mailed and emailed to all parties of record.

Exhibit #37 prepared by Skagit County's Geographic Information Systems (GIS) Department graphically depicts the subject parcels of the existing mine, proposed expansion thereto, contiguous parcels under the same ownership of the applicant, and the 300-foot buffer for noticing purposes.

Exhibit #38 is the 1st Addendum to original Staff Report.

JUNE 28, 2023, HEARING ON REMAND: ADDITIONAL STAFF SUGGESTED CONDITIONS OF APPROVAL:

In addition to the suggested conditions of approval that can be found in the original Staff Report/Findings of Fact dated August 26, 2020 (**See Exhibit #1**), Skagit County PDS staff suggested at the June 28, 2023, open-record public hearing on remand, the following conditions of approval after a review of the Geologic Hazard Site Assessment and Third-Party Review as follows:

1.	Development shall comply with all recommendations and requirements of the Geologic Hazard Site Assessment dated August 11, 2022, prepared by Wood Environment and Infrastructure Solutions, Inc.
2.	Development shall comply with all recommendations and requirements of the Third-Party Review performed by the Watershed Company.
3.	All applicable permits (local, state, and federal) must be secured before any mining/excavation activities begin onsite. Copies of permits shall be provided to the Skagit County Planning & Development Services Department.
4.	The applicant shall be responsible for reimbursement to Skagit County Planning & Development Services Department for the full cost of mailing(s) and newspaper publication associated with the Notice of Development Application, Notice of Issuance of SEPA MDNS, Notice of Hearing, and Notice of Decision. Payment shall be made prior to any work beginning onsite and grading permit application submittal &/or issuance.
5.	The applicant shall be responsible for reimbursement to Skagit County Planning & Development Services Department for the full cost of Third-Party Review of their Geologic Hazard Site Assessment. Payment shall be made prior to any work beginning onsite and grading permit application submittal &/or issuance.

EXHIBITS:

OLD EXHIBITS (FROM ORIGINAL STAFF REPORT, DATED AUGUST 26, 2020):	
Exhibit #1	Staff Report/Findings of Fact (Dated: August 26, 2020)
Exhibit #2	Special Use Permit Application and Narrative received December 2, 2016
Exhibit #3	Skagit County Zoning and Assessor's map
Exhibit #4	Site Plans and aerial photographs
Exhibit #5	Notice of Development Application, published February 2, 2017
Exhibit #6	SEPA Environmental Checklist, dated June 8, 2017
Exhibit #7	SEPA Mitigated Determination of Non-Significance (MDNS), dated December 3, 2018, and associated SEPA staff report
Exhibit #8	Critical Areas Reconnaissance by Skagit Wetlands and Critical Areas, dated February 24, 2017
Exhibit #9	Hydrogeologic Site Assessment Report by Maul Foster Alongi, dated September 28, 2016
Exhibit #10	Observation Well Installation letter report by Maul Foster Alongi, dated September 28, 2017
Exhibit #11	Letter from McLucas and Associates, responding to the Del Mar comment letter, dated December 19, 2018
Exhibit #12	Letter from Northwest Groundwater Consultants, responding to the Del Mar Comment letter, dated January 3, 2019
Exhibit #13	Lake Erie Pit Well Reconnaissance by Northwest Groundwater Consultants LLC, dated March 11, 2019
Exhibit #14	Lake Erie Gravel Pit Traffic Impact Analysis by Gibson Traffic Consultants, Inc., dated September 2016
Exhibit #15	Addendum to the Lake Erie Gravel Pit Traffic Impact Analysis by Gibson Traffic Consultants, Inc., dated May 12, 2017
Exhibit #16	Traffic Memorandum by Skagit County Public Works, Dated March 1, 2018.
Exhibit #17	Supplemental (traffic) Memorandum by Skagit County Public Works, dated May 2, 2018
Exhibit #18	Lake Erie Pit air quality best management practices by Maul Foster Alongi, dated September 15, 2016
Exhibit #19	Lake Erie Pit Expansion Noise Study by Acoustics Group, Inc,, dated September 16, 2016
Exhibit #20	List of neighboring property owners and parties of record notified of the Public Hearing.
Exhibit #21	A total of eighteen (18) comment letters were received during the comment periods. Fourteen (14) comment letters were received during the notice of development application (NODA) comment period, an additional three (3) comment letters were received during the Notice of Public Hearing (NoPH), and one (1) comment during the SEPA comment period. Comment letters and emails from the NODA, NoPH & SEPA comment periods are attached as Exhibit 21 and are in chronological order of receipt. Comments letters generally

OLD EXHIBITS (FROM ORIGINAL STAFF REPORT, DATED AUGUST 26, 2020):	
	expressed concern about aesthetics, a decrease in water quality of the area, a decrease in slope stability adjacent to Rosario Road, impacts to wetlands found offsite, impacts to fish and wildlife habitat conservation areas, impacts to potential perched/shallow groundwater conditions, increases in traffic, increases in noise and dust generation. Two of comment letters were in support of the proposal. The SEPA comment letter is discussed under Department Findings #6 and the response to the comments is include as Exhibit 9 & 10.
Exhibit #22	The fourteen (14) comment letters received during the NODA comment period were provided to McLucas and Associates, Inc., representing Lake Erie Pit LLC. McLucas and Associates responded to each of the comment letters. The applicants responses are included as Exhibit 22.
Exhibit #23	An additional five (5) comment letters were received outside of the comment periods. All 5 comment letter were from Mr. Andy Dunn, a hydrogeologist with RH2 Engineering. Mr. Dunn represents Bill & Pam Doddridge residing on parcel P19166 to the south of the proposed mine expansion area. The comments are specific to a concern that the gravel mining activities may breach a perched aquifer onsite resulting in subsurface draining Devils Elbow Lake, located on the Doddridge property. The comment letters are included as Exhibit 23. Investigation of their concern included advancing a boring and installation of an observation well near the southern property line, between the lake and the gravel mine. The boring was logged by the hydrogeologist of record and by Mr. Andy Dunn, LHg of RH.2 Engineering. A perched aquifer was not encountered during advancement of the boring to a depth of 277-feet below site grade, an elevation of 168.6 above MSL (see Exhibit 8).

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

NEW EXHIBITS (EXHIBITS ADMITTED INTO THE RECORD AT 6/28/2023 HEARING ON REMAND):	
Exhibit #24	Hearing Examiner's Approval of Special Use Permit, PL16-0556
Exhibit #25	Appellant's Appeal of Hearing Examiner Decision
Exhibit #26	Board of County Commissioners Remand/Resolution to the Hearing Examiner
Exhibit #27	Hearing Examiner Referral to Skagit County Planning & Development Services
Exhibit #28	-March 23, 2021 Letter from PDS to the Applicant Requesting Additional Info; -May 27, 2021 Letter from PDS to Applicant with deadline for Additional Info; -July 21, 2021 Letter from PDS Denying Special Use Permit Application
Exhibit #29	Applicant's Appeal of Planning & Development Services Denial of Special Use Permit
Exhibit #30	Hearing Examiner's Order Granting Appeal & Reversing County's Denial
Exhibit #31	Geologic Hazard Site Assessment (Received August 12, 2022)

NEW EXHIBITS (EXHIBITS ADMITTED INTO THE RECORD AT 6/28/2023 HEARING ON REMAND):	
Exhibit #32	Evergreen Island's Letter Dated: 11/18/2022 + Stratum Group Review of Geologic Hazard Site Assessment (Dated November 15, 2022)
Exhibit #33	Third-Party Review of Geologic Hazard Site Assessment & Response to Evergreen Island's Letter dated 11/18/2022 (Received January 19, 2023)
Exhibit #34	Evergreen Island Email & Letter Regarding Watershed Company Response to Evergreen Island's Communication of 11/18/2022 + Stratum Group Letter
Exhibit #35	Revised Third-Party Review of Geologic Hazard Site Assessment & Response to Evergreen Island's Letter dated 11/18/2022 (Received March 31, 2023)
Exhibit #36	Notice of Public Hearing (Published on 6/8/2023), Neighbor Labels, & Parties of Record
Exhibit #37	Skagit County GIS Map of Subject Parcels & 300-Foot Buffer
Exhibit #38	Addendum to Staff Report, dated June 28, 2023
Exhibit #39	Memorandum to Hearing Examiner, dated June 28, 2023
Exhibit #40	Third Round of Public Comments, various dates
Exhibit #41	Staff Hearing Presentation, presented June 28, 2023
Exhibit #42	Presentation of Tom Glade, presented June 28, 2023

On July 13, 2023, Skagit County Planning and Development Services Department received a **decision from the Hearing Examiner (See Exhibit #43), approving the subject application for a Special Use Permit application with an additional five conditions of approval as was suggested by staff**. This decision was posted on the county's website and mailed/emailed to all parties of records.

A Notice of Decision (**See Exhibit #44**) was issued and published in the Skagit Valley Herald on July 20, 2023, posted onsite, and emailed/mailed to parties of record. The appeal period ended on July 27, 2023.

During the appeal period, Skagit County's Planning and Development Services Department received two (2) timely appeals (**See Exhibit #45**) of the Hearing Examiner's approval/decision. The first appeal received was from Evergreen Islands (**PL23-0363**) while the second appeal received was from Sunset Lane Association (**PL23-0380**).

On September 29, 2023, the Board of County Commissioners (BOCC) conducted a Closed-Record Public Hearing regarding the two (2) appeals received. Following public testimony and deliberation on the matter, on October 6, 2023, the Board of County Commissioners issued a **remand order (Resolution # R20230197) to the Hearing Examiner** (**See Exhibit #46**). The BOCC remand to the Skagit County Hearing Examiner was the for preparation of a GHSA 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/northwest 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.

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

On October 6, 2023, the **Hearing Examiner** after considering of the above directions, determined that the appropriate course now is to refer this matter to Planning and Development Services (PDS), with instructions to direct the applicant to have another Geologically Hazardous Site Assessment be prepared and submitted to PDS, in accordance with the Board of County Commissioners' October 6 instructions (**See Exhibit #47**).

On October 10, 2024, Planning and Development Services Department wrote, emailed, and mailed a letter via USPS to the applicant requiring a Geologically Hazardous Site Assessment be prepared and submitted to PDS, in accordance with the Hearing Examiner/Board of County Commissioners' October 6 instructions (**See Exhibit #48**). The applicant had 120-days to provide this information to Skagit County PDS per SCC 14.16.105(1).

On January 4, 2024, the applicant submitted to Skagit County PDS a request for additional time to submit the requested items to Skagit County. A ninety (90) day extension **(See Exhibit #49)** to this 120-day deadline was granted on January 4, 2024. The requested additional items requested by the Hearing Examiner/Board of County Commissioners were now due by 4:30 PM on May 10, 2024, instead of February 10, 2024.

On February 29, 2024, the applicant submitted the requested Geohazard Site Assessment (GHSA) prepared by Northwest Groundwater Consultants (**See Exhibit #50**) to Skagit County's Planning and Development Services as had been requested. The new GHSA included a physical investigation and analysis performed assessing the north/northwest groundwater flow and potential impacts under different mine development scenarios as was requested by the Hearing Examiner and Board of County Commissioners.

Following a review of the submitted GHSA, Skagit County Planning and Development Services Department forwarded this report to the department's third-party review consultant- Facet (DCG/Watershed Company) for peer review. The DCG/Watershed Company recently merged with Facet.

On April 1, 2024, Skagit County Planning and Development Services received a peer review/third-party review by Facet **(See Exhibit #51)** of the Lake Erie Pit Groundwater Evaluation that was done by Northwest Groundwater Consultants, LLC. According to the peer review report performed by Facet, Facet did not have any suggested revisions or modifications to the Northwest Groundwater Consultant's Geohazard Site Assessment (GHSA) report that assessed/evaluated the north/northwest groundwater flow and potential impacts under different mine development scenarios. Furthermore, Facet believes that the Northwest

Groundwater Consultant's report meets the requirement for assessment of potential impacts on bluff retreat rates and slope stability required under SCC 14.24.420 and the Board of County Commissioners and Hearing Examiner remands.

Following this most recent third-party review, another Notice of Public Hearing (**See Exhibit #52**) was published in the Skagit Valley Herald on April 18, 2024, posted onsite, and mailed to neighboring landowners located within 300-feet of the subject parcels as is required by Skagit County Code. Additionally, the notice of record was both emailed/mailed to all parties of record.

MAY 08, 2024, HEARING ON REMAND: ADDITIONAL STAFF SUGGESTED CONDITIONS OF APPROVAL:

In addition to the suggested conditions of approval that can be found in the Staff Report/Findings of Fact dated August 26, 2020 (**See Exhibit #1**), and in the 1st Addendum to the staff report (**Exhibit #38**), staff suggests the following condition(s) of approval after a review of the Geohazard Site Assessment (GHSA) prepared by Northwest Groundwater Consultant and Third-Party Review performed by Facet (DCG/Watershed Company) as follows:

1. The current 50-foot buffer width shall be increased to 100-feet along the western boundary of parcels P19108, P19162, P19155, and P19158. No development, grading, cut, and/or fill shall be allowed within this 100-foot buffer as is measured from the western property lines. The applicant shall revise their most current site plan to depict this 100-buffer width/area.

NEW EXHIBITS SUGGESTED BY PDS STAFF AT THE 5/8/24 HEARING ON REMAND:	
Exhibit #43	Hearing Examiner's Approval of Special Use Permit, PL16-0556 on Remand, dated: July 13, 2023
Exhibit #44	Notice of Decision
Exhibit #45	2 Appeals Received: Evergreen Island, PL23-0363 & Sunset Lane Association, PL23-0380
Exhibit #46	BOCC Remand Order, Resolution #R20230197, Dated October 6, 2023
Exhibit #47	Hearing Examiner Remand Order to PDS, Dated: October 6, 2023
Exhibit #48	Skagit County PDS Letter to Applicant, Dated: October 10, 2023
Exhibit #49	90-Day Extension of Time to Submit Additional Information Requested, Dated: January 4, 2024
Exhibit #50	Northwest Groundwater Consultants, Geohazard Site Assessment, Dated: February 29, 2024
Exhibit #51	Facet Peer Review/Third-Party Review, Dated: April 1, 2024
Exhibit #52	Notice of Public Hearing
Exhibit #53	2nd Addendum to Staff Report, Dated: May 8, 2024
Exhibit #54	Evergreen Island Response to HGC & Facet, Dated: April 19, 2024
Exhibit #55	Loring Advising/Evergreen Island's, Remand Requests Unaddressed Letter, Dated: June 23, 2023

MAY 8, 2024, OPEN-RECORD PUBLIC HEARING ON REMAND:

The most current Geologic Hazard Site Assessment (GHSA) prepared by Northwest Groundwater Consultant's is now complete, which addresses the BOCC and Hearing Examiner's order/direction that include an additional physical investigation and analysis be performed to assess the north/northwest groundwater flow and potential impacts under different mine development scenarios,

Additionally, peer review/Third-Party review of Northwest Groundwater Consultant's GHSA has occurred with **no revisions and/or modifications suggested**. This matter will now go back to the Hearing Examiner for review, public testimony, deliberation, and consideration. **The purpose of the hearing is only to review the remanded item(s) required by the Hearing Examiner per his October 6, 2023, remand order to Skagit County's Planning and Development Services Department for Special Use Permit Application, PL16-0556**.

STAFF RECOMMENDATION:

Based on a review of the application material submitted, special use permit criteria of approval, SEPA environmental checklist, environmental studies, two (2) Third-Party reviews, an issued SEPA Mitigated Determination of Non-Significance (MDNS), and the Findings of Fact/Staff Report (and Addendums thereto), staff recommends to the Hearing Examiner that the subject Special Use Permit application be approved subject to conformance with staff's suggested conditions of approval (**as is listed in the Exhibit #1, Exhibit #38 and Exhibit #53)**.

If you have any questions, please let me know. I can be reached by phone at (360) 416-1423 or via email at kcricchio@co.skagit.wa.us. Thank you.

Kevin Cricchio

Kevin Cricchio, AICP, ISA,
Senior Planner
Skagit County
Planning & Development Services

EXHIBIT #54

EVERGREEN ISLAND RESPONSE TO HGC & FACET, DATED: APRIL 19, 2024

LORING ADVISING

By Email

April 19, 2024

Skagit County Hearing Examiner
Skagit County Planning and Development Services
1800 Continental Place
Mount Vernon, WA 98273
hearings@co.skagit.wa.us

Re: File No. PL16-0056 – Applicant's Review on Second Remand & Third-party review

Dear Mr. Hearing Examiner,

I am submitting this letter and the attached opinion letter from Dan McShane on behalf of Evergreen Islands ("Evergreen") to address the February 29, 2024 report that Northwest Groundwater Consultants ("NGC Report") provided in response to the second remand for the Lake Erie Pit application. This letter also addresses the third-party review by Alan Wald ("Wald Review") that purports to evaluate the NGC Report.

Distressingly, and notwithstanding that this is the third chance the applicant has had to legitimately evaluate the landslide risk likely to be caused by clearing and mining 35 acres near unstable coastal bluffs, the NGC Report fails to analyze the risk that groundwater infiltration from the new mining will significantly increase groundwater discharging from springs in those bluffs that are located 22 feet lower/downgradient. Instead, the report speculates that non-existent bedrock deflects groundwater flow and that rain does not infiltrate into the ground at the site, and overlooks similarities in water quality between wells near the site and the spring. We note that the author of the NGC Report is the same person who authored the hydrogeologic site assessment and well reports between 2016 and 2019 and who relied on incomplete information to assume that groundwater flows to the north and northeast of the site. This may explain the NGC Report's inability to recognize the compelling data indicating a robust hydrological connection between the groundwater at the mine and at the spring to the northwest.

Regardless of the reason, the applicant has repeatedly demonstrated an unwillingness to evaluate the landslide risks associated with the proposed mine, and Evergreen Islands therefore requests that Skagit County deny the application. Evergreen Islands does not make this request lightly, but nearly eight years have passed since submission of the initial application and the community has yet to receive a valid investigation into the mine's potential impacts on the nearby unstable bluffs. Indeed, more than 2 ½ years have passed since the applicant obtained, and subsequently discarded, a proposal designed to elicit this essential information. Denial is the reasonable, warranted response at this point. The applicant can then decide whether it would be worthwhile to conduct a valid geologic hazard site assessment and, if so, reapply for the mining project with that information.

The sections below summarize the factual background and the standards for the preparation of an Assessment, and then identify the flaws in NGC's work and the Wald review, as explained in greater detail in the attached opinion letter by Dan McShane. The letter concludes by comparing insufficient review with the study that would have occurred if the applicant had allowed the consultants they hired in 2021 to conduct their assessment.

Mr. McShane has spent considerable time investigating the geology of the neighborhoods surrounding the site and emphatically disagrees with NGC's assertion that groundwater at the site flows primarily to the northeast and that stormwater does not infiltrate into groundwater within the 35 acres proposed for mining. He also expresses severe concerns about Mr. Wald's misrepresentation of local science about the coastal geology west of the site. Mr. McShane concludes that "[t]he water elevations at MW01 and North Spring clearly show a steep gradient in the groundwater towards the shoreline bluffs. Expansion of the mine will increase groundwater recharge to the mine and result in an increase of water flowing to the bluffs. It is my opinion that this will result in an increase of the frequency of saturated soils and increased high pore water pressures leading to an increase in the frequency of slope failures."

A. BACKGROUND

This matter involves a proposal by Lake Erie Pit 1 ("Applicant") to clear more than 35

acres of trees, shrubs, soil, and a layer of glacial till, and to mine approximately 60,000 tons of underlying gravel. On February 23, 2021, the Skagit County Board of Commissioners ("Board") reversed a Hearing Examiner approval for Special Use Permit PL16-0556 on the grounds that the Applicant had not conducted a Geologically Hazardous Area Site Assessment ("Assessment") and that Appellant Evergreen Islands had furnished evidence of springs discharging from unstable shoreline bluffs at an elevation downgradient of the inferred groundwater level at the mine. The Board consequently remanded the matter to determine whether the shoreline bluffs required the preparation of an Assessment, and if so, to have one conducted and conditions imposed as necessary to mitigate identified risks. In August 2022, the Applicant provided a report by Wood Environment & Infrastructure Solutions, Inc. that omitted a review of potential hydrogeological impacts on the unstable bluffs to the northwest. After a third-party report for Skagit County ("County") likewise overlooked these potential mine impacts and the Hearing Examiner again granted the permit, Evergreen Islands appealed the lack of analysis of landslide risk to the Board.

On October 6, 2023, for the second time, the Board granted the appeal and remanded this matter for the preparation of an Assessment.[1] The Board ruled that the Assessment must be consistent with the requirements of SCC 14.24.400-.420, including but not limited to SCC 14.24.420€ and (f). The Board directed the Hearing Examiner to consider any necessary evidence and to impose any additional conditions warranted by the foregoing analysis. The Board expressly directed that "additional physical investigation and analysis will be performed to assess the north/northwest 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."[2]

The Applicant subsequently obtained a report from NGC that involved the drilling of two new monitoring wells (denoted MW-1 and MW-2) and a snapshot of groundwater elevations

[1] Resolution # R20230197, at 4.
[2] Resolution # R20230197, at 4.

and water quality samples from those wells, a few private wells, and nearby springs.[3] The NGC Report states that the two monitoring wells were drilled in locations to investigate groundwater conditions in the north and west portions of the site, but an attached map shows that neither of them were drilled in the mine expansion area.[4]

Based on a limited sample of a single groundwater elevation measurement, the NGC Report shows that the groundwater elevation at North Spring, in the coastal bluff northwest of most of the mining area, is much lower than groundwater elevations measured in the other observed wells.[5] The North Spring discharges at an elevation of 169.3 feet, whereas groundwater flows through the East well at an elevation of 191.5 feet and in the two new wells at 194.9 feet (MW-2) and 191.4 feet (MW-1).[6] Wells to the north and northeast of these three wells reflected groundwater elevations of 184.5-190.6 feet. Figure 4 of the NGC Report shows that the 22-foot drop from MW-1 to North Spring occurs over a distance of approximately 850 feet, whereas the difference between MW-1 and the Reisner well to the east is 3.4 feet over a distance of about 1500 feet.[7]

The NGC Report does not analyze the effect of this steep gradient between groundwater at the mine site and that discharging from springs in the bluff. Instead, it concludes that "groundwater elevations measured in Site and private wells show that most groundwater in the central and east portions of the Site generally flows to the northeast and smaller components flow to the north and northwest."[8] The NGC Report also declares that bedrock "likely creates a no flow boundary" that redirects water to the central portion of the site.[9] This statement appears to rely on an online geology portal from the Washington State

[3] Northwest Groundwater Consultants, LLC, Lake Erie Pit Groundwater Evaluation (Feb. 29, 2024) (hereafter "NGC Report").
[4] NGC Report, Figure 7 (showing MW-1 at the northern boundary of the site, in an area that has been mined, and MW-2 southwest of the mine expansion).
[5] NGC Report, at 10 (Table 3).
[6] NGC Report, at 10 (Table 3).
[7] NGC Report, at Figure 4. A-A' Cross Section.
[8] NGC Report, at 12.
[9] NGC Report, at 11.

Department of Natural Resources.[10] As noted by Dan McShane, the NGC Report does not indicate whether an effort was made to verify the portal's accuracy by groundtruthing it with site observations.[11] Mr. McShane, who has conducted numerous site visits in the vicinity of the proposed mine, notes that bedrock does not exist in the location surmised by the map and offers site-specific maps showing that the nearest bedrock occurs a few hundred feet west of the site, near the shoreline.[12]

The NGC Report also concludes that springs in the coastal bluffs may not be hydrologically connected to groundwater at the site based on "differences in the water types."[13] A review of the results provided by the NGC Report indicates that the water quality parameters it measured are similar for most of the wells and springs and that the East Well and Wooding well are outliers for a few parameters.[14] As discussed below, errors in the implemented sampling protocol may explain these small differences.

Last, the NGC Report asserts that groundwater flow at the site likely will not increase after removal of the glacial till that currently impedes infiltration.[15] NGC does not offer a plausible scientific theory to explain why stormwater would not soak into the ground. Nor does NGC acknowledge that their opinion conflicts with local best available science that calculates significant groundwater recharge rates for similar geological settings in Island County and San Juan County.[16] Instead, the NGC Report asserts that groundwater levels in the new wells did not change significantly during an "atmospheric river," that glacial outwash was dry, and that groundwater flows to the northeast.[17] The report does not explain how the author could determine that groundwater levels did not change based on a single measurement.

[10] NGC Report, at 11, and at Figure 4 (referring at Notes to DNR); McShane Report, at 3.
[11] NGC Report, at 3; McShane Report, at 3.
[12] McShane Report, at 3-5.
[13] NGC Report, at 12.
[14] NGC Report, at Figures 1-3; McShane Report, at 5.
[15] NGC Report, at 13.
[16] *Id.*; McShane Report, at 11-12.
[17] NGC Report, at 12.

B. APPLICABLE CODE CRITERIA FOR MINING SPECIAL USE PERMITS AND FOR GEOLOGIC HAZARD SITE ASSESSMENT

While the specific issue before the Hearing Examiner is whether the applicant provided valid information responsive to the order on remand, it is useful to keep in mind the overarching criteria that must be satisfied to approve a Mining Special Use Permit. An applicant for a mine permit bears the burden of proving that the impacts of the mine comply with Skagit County's Mineral Resource Overlay regulations and incorporated Special Use Permit criteria, and that conditions will mitigate detrimental impacts to the environment and will protect the general welfare, health and safety. SCC 14.16.440(9)(a). If the impacts are mitigable, then the permit shall be granted. *Id.* Mitigating conditions must be performance-based, objective standards. *Id.* In addition, the County's mining rules are "minimum standards based on unique site-specific factors or conditions as appropriate to protect public health, safety, and the environment." SCC 14.16.440(9)(b). Ultimately, appropriate conditions "shall be required to mitigate existing and potential incompatibilities between the mineral extraction operation and adjacent parcels." SCC 14.16.440(9)(c). In addition, site-specific conditions are required to mitigate a mine's stormwater runoff and erosion impact. SCC 14.16.440(9)(d).

In applying for a special use permit, the applicant bears the burden of demonstrating that the proposed activity will not adversely affect or prevent those uses normally allowed within the respective district and of proving compliance with the Special Use Permit criteria.[18] The applicant must demonstrate that the application satisfies criteria that include the following:

- The proposed use will not cause potential adverse effects on the general public health, safety, and welfare; and
- The proposed use is not in conflict with the health and safety of the community.[19]

More directly applicable to the remand order, the Code establishes criteria for a valid

[18] SCC 14.16.900(1)(a), (1)(b)(v).
[19] SCC 14.16.900(1)(b)(v)(E), (v)(G).

geologic hazard site assessment. A site assessment must be prepared by a qualified professional for the type of critical area involved and must contain information specified for that critical area. SCC 14.24.080(4)(a). The site assessment must use scientifically valid methods and studies in the analysis of critical areas data and field reconnaissance. SCC 14.24.080(4)(b). Critical areas site assessments generally must include: (1) an identification and characterization of all critical areas and buffers adjacent to the proposed project area; (2) an assessment of the probable cumulative impacts to critical areas resulting from development of the site and the proposed development; (3) a description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations; (4) a description of the efforts made to apply mitigation sequencing; and (5) a proposed mitigation plan. SCC 14.24.080(4)(c). Geologic hazard site assessments must also include: (1) 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; (2) a description of load intensity, and surface and groundwater conditions; (3) an estimate of bluff retreat rate for potential coastal bluff geologic hazards; (4) an estimate of slope stability for potential landslide hazards; and (5) additional site assessment elements as required by the Administrative Official. SCC 14.24.420(2).

The NGC Report does not satisfy the SUP or the site assessment criteria. It does not meet the Applicant's burden of demonstrating that the proposed use: (1) will not cause potential adverse effects on the general public health, safety, and welfare; and (2) is not in conflict with the health and safety of the community. SCC 14.19.900(1)(b). As explained below, the report speculates that the groundwater at the site is not hydrologically connected to springs in unstable bluffs in the face of substantial evidence to the contrary. Further, the report does not fully identify and characterize the unstable slope and buffers, does not assess the probable cumulative impacts to those slopes, does not consider impacts to drainage alterations, and does not apply the mitigation sequence. SCC 14.24.080(4)(c). Last, and most crucially, the report does not assess the geologic characteristics of the soils in the unstable bluffs where springs northwest of the site discharge groundwater on affected adjacent

properties, does not describe the load intensity and surface and groundwater conditions between the site and the springs to the northwest, and does not estimate the slope stability for potential landslides caused or exacerbated by the mine's intensification of groundwater flow to the springs. SCC 14.24.420(2). Instead, the NGC Report evades these analyses on the unsupported grounds that bedrock redirects groundwater, that groundwater characteristics differ between the site and the bluffs, and that stormwater does not soak into the ground at the site.

C. DISCUSSION

This section examines NGC's claims that: (1) a bedrock outcrop redirects groundwater from the site away from the spring to the northwest; (2) measurements show different water quality in the springs than in the wells; and (3) that rainwater in the newly mined area would not infiltrate into the groundwater at the site. Because these groundless claims prevented NGC from conducting an Assessment for site impacts on the unstable bluffs, the NGC Report does not demonstrate that the proposal satisfies the Mining Special Use Permit and Geologic Hazard Site Assessment criteria set forth at Section B above.

1. Groundwater at the Mine Site is Very Likely Hydrologically Connected to Groundwater Discharging from the Nearby Downgradient Springs.

Although well elevation data indicate a robust connection between groundwater at the mine site and groundwater discharging from the coastal bluffs, the NGC Report concludes that there likely is not a strong hydrological connection based on illusory support. First, NGC relies on an online mapping portal rather than site-specific maps and field verification to suggest that unverified bedrock may prevent groundwater from flowing in that direction.[20] Second, NGC asserts that water quality differences exist between water at the springs and water at the wells, yet the samples reveal similar water chemistry with the exception of one to two wells.[21] Further, the water samples would be anticipated to reflect variation in their constituents

[20] NGC Report, at 11.
[21] *Compare* NGC Report, at 9 (classification scheme) *with* NGC Report, at Figure 1 (Piper Diagrams showing similar constituents).

because they were drawn from different portions of the aquifer and under different sampling conditions.[22]

a. Strong evidence of hydrological connection between the mine and spring in unstable bluffs.

The magnitude of the difference between the higher groundwater elevations at the mine site (191.5-194.9 feet) and the lower elevations observed in the North Spring (169.3 feet) demonstrates that a substantial amount of the groundwater discharging from the bluffs likely flows through the mine site.[23] While the gradient in the applicant's assumed direction of groundwater flow to the east is 0.0023, or 12 vertical feet per mile, the gradient between MW-1 and the North Spring is 0.0246, or approximately 130 feet/mile, ten times steeper.[24] According to Mr. McShane, "the highest groundwater flow velocities will follow the steepest groundwater slope or gradient."[25] Consequently, the data provided by the NGC Report indicates that groundwater flows from the mine site to the North Spring.[26]

b. Nonexistent bedrock.

NGC asserts that

> [a]s previously discussed in the Geology section above, bedrock (Fidalgo ophiolite) is mapped in the northwest portion of Parcel P19158. Its presence at or near surface likely creates a no flow boundary in the northwest portion of Parcel P19158. Groundwater flow from the southwest portion of the Site likely is redirected to the central portion of the Site due to the presence of this bedrock.[27]

NGC does not indicate that it conducted a site investigation to verify the existence of the bedrock.

However, Dan McShane has conducted numerous visits in the vicinity of the site and has

[22] McShane Report, at 5.
[23] McShane Report, at 2, 6.
[24] McShane Report, at 6.
[25] McShane Report, at 6.
[26] McShane Report, at 6.
[27] NGC Report, at 11.

not detected bedrock in the northwest portion of Parcel P19158.[28] Mr. McShane has walked along Rosario Road and observed the western parts of the proposed mine expansion property from the road, including Parcel P19158, and declares that:

> 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.[29]

Mr. McShane further explains that NGC's failure to visually investigate the site contravenes standard geologic practice, particularly when NGC relies on the alleged existence of this bedrock to support its claim that a bedrock ridge likely deflects groundwater flow.[30] Instead, the NGC Report relies on an on-line map from the Washington Department of Natural Resources Geology Portal that contains errors that should have been recognized through direct investigation.[31] NGC did not discover these errors because they do not appear to have conducted visual observations.[32] Nor did NGC appear to review a map by Miller and Pessel that they referenced, as this map does not show bedrock at the site.[33] NGC also would have learned that site-specific mapping shows the absence of bedrock if they had reviewed mapping by Pessel and others.[34] But NGC did not conduct this baseline review, and instead asserts that bedrock redirects groundwater flow at the site notwithstanding the absence of bedrock at the site.[35] This omission, and the failure to map and study other springs and landslides located to the northwest of the proposed mine, qualify as a failure to conduct the Assessment required by the Board on remand.

[28] McShane Report, at 3.
[29] McShane Report, at 3.
[30] McShane Report, at 3.
[31] McShane Report, at 3.
[32] McShane Report, at 3.
[33] McShane Report, at 3-4 (referencing NGC Report, at 3).
[34] McShane Report, at 4.
[35] McShane Report, at 4.

c. The water sources reflect similar water chemistry.

The NGC Report suggests that "distinct differences in water chemistry between the North Spring and that of the groundwater beneath the site" indicate that a hydrologic connection may not exist. The Wald Report repeats this claim without analyzing whether distinct differences exist or whether the sampling methods would explain the differences.[36] Instead, the Wald Report discusses groundwater elevations and ignores the steep downward gradient to the northwest, focusing instead on the slight gradient to the east.[37]

As explained by Mr. McShane and as can be seen by reviewing the diagrams in the NGC Report, the water quality data do not support the claim that water chemistry in the North Spring differs significantly from that in wells at the site.[38] The three Piper Diagrams that the report offers to visually compare the water sources based on a variety of constituents show tight clustering of all of the water sources other than the East well and the Wooding well, revealing that they share similar levels of those constituents.[39] Thus, to the extent that an outlier exists, it is the East well, followed by the Wooding well, which do not show similar characteristics with each other. Regardless, the small differences in water parameters do not support NGC's speculation that a hydrologic connection may not exist between groundwater at the site and the North Spring.[40]

Instead, to the extent that sampling shows different levels of constituents, it likely can be explained by the consultant's use of samples from different zones in the aquifer, which would be anticipated to contain different constituents.[41] For example, water from the East Well comes from the bottom of the aquifer or below because that well is an open-ended pipe that draws from the bottom where silt and wood fragments exist.[42] Water in the other wells would

[36] Wald Report, at 2.
[37] Wald Report, at 2.
[38] McShane Report, at 6.
[39] NGC Report, at Figure 1.
[40] McShane Report, at 6.
[41] McShane Report, at 5-7.
[42] McShane Report, at 5; NGC Report, at 2.

not be expected to represent the character of water in the water column or the aquifer overall because that water is drawn through a small screen that draws water from a limited vertical portion of the aquifer.[43] Last, the water discharging from the springs would be expected to differ from well water drawn from the earth because that water passes through organic matter on the steep landslide slope immediately above the spring and because the spring water flows through weathered soil and would be exposed to atmospheric air.[44] Thus, the NGC Report relied on sampling of different types of water, which likely explains the small differences in the water parameters measured.

d. The water level measurements in the residential wells may have underestimated static water elevations.

The water level measurements taken for the residential wells suffer from two infirmities: (1) they were not surveyed; and (2) they may not have ensured that pumping ceased with sufficient time for the wells to recover to their static levels prior to the measurement.[45]

First, the very similar heights of the water levels measured across all wells warranted a survey for accuracy.[46] With the exception of the De Vries well, the difference in measured elevation between the East well and the residential wells was 3.5 feet.[47] Nonetheless, water levels were measured with a Trimble R1 GNSS Receiver that has an accuracy only to 1 meter, or 3.2 feet.[48] Thus, if the receiver overestimated the elevation of the East well by 2 feet, meaning that its elevation is actually 189.5 feet, and underestimated the water height in any of the residential wells by 2 feet, meaning that they actually range from 186.5 feet 192.6 feet, it would indicate a different groundwater flow altogether. Although the Trimble device's error range would not affect the significant downgradient elevations from the site to North Spring, a survey

[43] McShane Report, at 5.
[44] McShane Report, at 5.
[45] McShane Report, at 6-8.
[46] McShane Report, at 7-8.
[47] NGC Report, at Table 3.
[48] McShane Report, at 7.

is essential given that inaccuracies within the accepted range for the Trimble could directly undermine NGC's assertion that groundwater flows to the northeast, and would qualify as a standard practice.[49]

Second, the well pumping may not have ceased far enough in advance to allow water levels to return to their static elevation in the residential wells.[50] The NGC Report states that the pumps were not operating at the time that measurements were taken, but does not identify when they stopped pumping, or the amount of time that elapsed between that action and the measurements.[51] It is not possible without this information to confirm that water levels had risen back to their static level, and the measurements therefore may have underrepresented the actual water level.[52] With such a small difference between the water heights observed in the residential wells and the monitoring wells, this is a material omission. It is even more important given the fine material in which those residential wells are situated, which causes a longer recharge period than if they were installed in sand and gravel.[53] As set forth by Mr. McShane, "[t]his uncertainty regarding water level recovery is significant enough to affect the interpretation of water flow direction between the wells."[54]

While the data unquestionably show a large differential between the wells at the site and the North Spring, the lack of demonstrated accuracy in the measurements for the wells at the site and the residential wells directly undermines NGC's narrative that groundwater flows to the north/northeast from the site.

On a final point, the Wald Report does not support the water level measurements because it relies on inarticulated and incorrect assumptions. First, Wald fails to recognize that the margin of error inherent in the tool used for the measurement actually exceeds the

[49] McShane Report, at 7-8.
[50] McShane Report, at 6-7.
[51] NGC Report, at 10.
[52] McShane Report, at 6-7.
[53] McShane Report, at 7.
[54] McShane Report, at 7.

measured difference.[55] Second, Wald blandly asserts that groundwater levels were measured following accepted protocols, but does not identify those protocols and does not explain why it would be acceptable to use a measurement technique with a margin of error broad enough to misrepresent the direction of groundwater flow when more precise techniques are available.[56] Third, although Wald notes the potential recharge issue, he appears to assume that the residential wells have recovered to their static wells based on an incorrect assumption that they are located in sand and gravel strata that recharge quickly.[57] As discussed in Mr. McShane's report, the well logs show that the Calvert, De Vries, and Reisner wells are screened in areas of fine sand or silt with clay layers bounding those areas.[58] These materials significantly delay well recovery after the pumping has ceased.[59] Consequently, these wells may not have been allowed to fully recover from standard residential well pumping and the report may underestimate their static groundwater heights.

2. Local aquifer recharge science rebuts the NGC claim that water will not infiltrate into the ground at the site.

NGC infers that mining at the site will not increase groundwater infiltration based on alleged observations that soils were dry when drilling wells MW-1 and MW-2 and the claim that groundwater levels measured in those wells did not significantly change during drilling.[60] NGC does not justify these assertions in the lone paragraph it dedicates to this bold proposition that stormwater will not infiltrate into groundwater at the site once the till layer that currently serves as a barrier is removed.[61] Nor does NGC offer an alternative explanation for the path traveled by the stormwater that falls at the site.

The McShane Report identifies several flaws with NGC's assertions, namely:[62]

[55] Wald Report, at 1.
[56] Wald Report, at 1.
[57] Wald Report, at 1.
[58] McShane Report, at 7.
[59] *Id.*
[60] NGC Report, at 12.
[61] *Id.*
[62] McShane Report, at 11-12.

- NGC does not explain why groundwater recharge does not occur at the site given the local measurements that have been applied to Island County and San Juan County. United States Geological Survey studies have found that groundwater recharge typically amounts to 10-20 inches per year in glacial outwash sediments like those underlying the mine site;

- NGC does not explore the possibility that a fundamental principle of groundwater recharge could explain the observations, if accurate. When water infiltrates through unsaturated soils including sand and gravel between the ground surface and the water table, it very often develops preferential flow paths that single borings likely will not encounter;

- NGC's characterization of the soils encountered during drilling as dry may not be accurate. The well log for MW-1 indicates that the drillers added water when they encountered sand flowing into the bore hole, to prevent that flow, which usually happens when the drill encounters saturated sands. This indicates a likely wet zone; and

- No soils were measured for moisture. The well log for MW-1 used the term "dry" but did not quantify it and a logical explanation for that term was that the sediment that was being blown out of the boring with pressurized air was not wet. This could be explained by the heat generated by the substantial friction that the drilling bit generates, as well as the soil being air-dried when it is blown up through the drill casing.

As explained by Mr. McShane, consistent with generally accepted principles of groundwater recharge, removal of the till layer at the site will substantially increase groundwater recharge to the deep aquifer on the mine property.[63] By expanding the mine and removing the till that forms a vertical barrier for water infiltration, the project would change the hydrology and increase the flow of water toward the unstable bluff slopes to the

[63] McShane Report, at 12.

northwest.[64] By declaring that groundwater recharge does not occur at the site, NGC avoided evaluating the volume of this increased flow.[65] As calculated by Dan McShane, the recharge at the site likely would fall in the range of 271,333 gallons to 542,666 gallons per acre.[66]

3. The Wald Report offered erroneous information about the unstable shoreline bluffs west of the proposed mine.

As explained in detail by the McShane report,[67] the Wald Report relied on a misinterpretation of a study of the coastal geology west of the site to dangerously suggest that "[t]he small slides are typically non-hazardous slope readjustments due to local slumps, soil creep, and surface erosion."[68] Wald did not indicate that he visited the site or observed slope conditions in the bluffs near the site. Conversely, Mr. McShane has visited those slopes on numerous occasions, and has described in previous comments a relatively recent sand blowout feature just north of the North Spring amphitheater feature.[69] Landslide blowouts that form cave-like areas below unconsolidated sediments are very hazardous, and Mr. McShane opines that Wald's statement to the contrary was highly irresponsible and dangerously misleading and that it is an unacceptable practice to make a statement about landslide safety without directly observing the site in question.[70] Mr. McShane consequently recommends that the County reconsider using the third-party reviewer in the future, emphasizing that "Skagit County should reconsider ever using this geologist for third party reviews."[71]

4. The landsliding in the coastal bluffs is caused by groundwater conditions that will be exacerbated by the proposed mine.

The NGC Report does not attempt to ascertain bluff retreat or erosion rates, and the Wald Report misrepresents the long-term bluff retreat rate west of the mine site.[72] Wald

[64] McShane Report, at 12.
[65] McShane Report, at 12.
[66] McShane Report, at 12.
[67] McShane Report, at 8-11.
[68] Wald Report, at 3.
[69] McShane Report, at 10.
[70] McShane Report, at 10.
[71] McShane Report, at 10 (emphasis in original).
[72] McShane Report, at 10-11.

purports to rely on a 1988 Keuler study to estimate long-term bluff retreat rates of 2-4 cm/yr.[73] However, Keuler did not find that the landslides in the area northwest of the mine stemmed from wave erosion. Instead, he indicated that the bluffs were in an area "'of substantial sediment loss caused by large sporadic landslides (little or no direct wave erosion),'" which was consistent with his earlier finding that "'[t]he failures almost certainly are controlled only by the stratigraphic and groundwater conditions, and are not influenced by marine erosion.'"[74]

Due to this hydrogeologic reality, Mr. McShane states that, "[i]ncreased groundwater from removing the impermeable glacial till to mine the sand and gravel will result in an increase in groundwater flow to these unstable slopes leading to an increase in slope failures within the amphitheater-like landforms."[75]

5. The Applicant Discarded a Proposal to Conduct a Valid Geologically Hazardous Area Study.

It bears repeating that the Applicant discarded a 2021 proposal by Canyon Environmental Group to conduct a geohazard study.[76] The Applicant relied heavily on that proposal to defeat the County's denial of its application for failure to timely submit information about its groundwater impacts in 2021. But at some point between 2021 and 2023, the Applicant decided not to pursue that proposal. It contained elements designed to accurately characterize groundwater flow at the site, including:

- installation of 3-4 permanent groundwater monitoring wells in time to gather as much data during the rainy season as possible;

- monitoring of the wells digitally and manually throughout the wet season, collecting measurements every 1-3 hours;

[73] Wald Report, at 3.
[74] McShane Report, at 11 (quoting Keuler (1988) and Keuler (1979)).
[75] McShane Report, at 11 (emphasis added).
[76] See Canyon Environmental Group, Proposed Hydrogeology and Groundwater Characterization Timelines (Sept. 7, 2021) (attached hereto as Attachment B).

- drilling of two temporary bore holes along the western boundary during the height of the wet season to assess whether perched water tables are potentially present and contributing to seeps known to exist west of the mine;

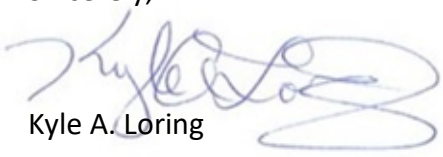
- conducting modeling to evaluate groundwater flow direction and potential groundwater impacts and implications of the proposed gravel mine expansion.

In contrast, the NGC report involved the installation of two monitoring wells[77] and the reporting of a single water elevation measurement,[78] taken on two different days four weeks apart in January—January 4, 2024 for the springs and January 31, 2024 for the wells. The immense gap between the quality of the proposed investigation and the level of review conducted may explain the failure to examine the mine's likely impacts on the unstable bluffs to the northwest.

D. CONCLUSION

The NGC Report relies on unfounded speculation to continue to assert that groundwater does not flow between the mine site and the unstable bluffs to the northwest notwithstanding patent evidence to the contrary – the significant vertical gradient between the two. This does not meet the Applicant's burden to show that the project avoids public harm or that landslide risks have been properly identified and addressed. The report should be disregarded and the permit denied until the Applicant obtains an Assessment consistent with the requirements for a Mining Special Use Permit.

Sincerely,



Kyle A. Loring

Cc: Kevin Cricchio, Senior Planner
Jason D'Avignon, Deputy Prosecuting Attorney
Marlene Finley, Evergreen Islands

[77] NGC Report, at 5.
[78] NGC Report, at 10.

Attachments: Stratum Group Comments Regarding: Lake Erie Groundwater Evaluation and third-party review

Canyon Environmental Group, Skagit County Hearing Examiner Request for Additional Information (PL16-0556): Proposed Hydrogeology and Groundwater Characterization Timeline (Sept. 7, 2021)

ATTACHMENT A

STRATUM GROUP
PO Box 2546, Bellingham, Washington 98227

April 18, 2024

Jan Heald Robinson
Board Member, Evergreen Islands

Re: **Comments regarding:**
Lake Erie Groundwater Evaluation and third-party review

Dear Jan,

You asked me to review the Northwest Groundwater Consultants, LLC (NGC) letter titled Lake Erie Pit Groundwater Evaluation and Skagit County's 3rd-party review letter from Facet. Based on my professional review, and as explained in detail below, these documents continue to avoid evaluating the geologic risk that the proposed Lake Erie gravel pit expansion poses to the unstable bluffs to the northwest of the mine. In fact, the data from MW01 indicates there is a strong groundwater flow gradient from the mine area toward the unstable bluffs to the northwest of the mine. The 3rd-party review overlooks this information and adds to the flaws in the NGC review by providing inaccurate and highly misleading information about the bluff slopes to the west of the mine.

Together, the NGC and Facet documents display the following errors:

- The NGC report opines that groundwater flows away from the shoreline bluffs, but produces data of a steep vertical gradient between groundwater elevation at the site (191.4 feet) and groundwater elevation in the bluff (169.3 feet) that indicates that groundwater flows primarily toward the bluffs.

- The NGC report opines that bedrock blocks groundwater flowing from the mine to the shoreline bluffs based on erroneous statements about the presence of bedrock on the site and along Rosario Drive.

- The NGC report relies on the results of water quality testing that do not provide meaningful information about the direction of groundwater flow.

- The method NGC used for measuring groundwater elevations contains inaccuracies that are significant enough to affect the interpretation of water flow direction between the wells, though it nonetheless indicated a flow toward the bluffs.

- The 3rd-Party report provides erroneous information about the bluff area west of the

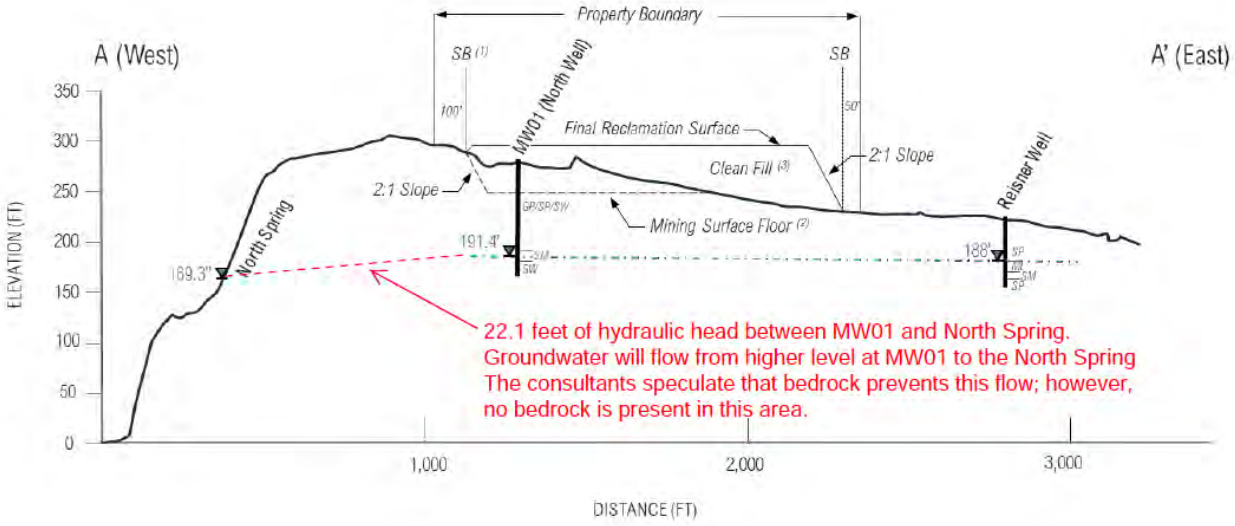
mine.

- The NGC report that groundwater recharge will not take place is contrary to best available science studies by the United States Geologic Services.

The sections below detail the flaws and erroneous assumptions and speculations in the reports, and identify the information needed to address them.

A. The Report Does Not Demonstrate that Groundwater at the Site Moves Away from the Shoreline Bluffs.

Groundwater elevations between the mine and the North Spring indicate that groundwater will flow predominantly towards the northwest from the mine site towards the shoreline bluff. As seen in the diagram below, the new groundwater elevation data provided by the installation of MW01, at the north end of the pit, confirms that there is a steep groundwater gradient from the mine area to the groundwater spring within that landslide area to the northwest of the mine. The groundwater elevation measured at MW01 was 191.4 feet while the groundwater elevation at North Spring was 169.3 feet, a full 22.1 feet lower at a distance of approximately 850 feet.



From Figure 4 of Northwest Groundwater Consultants. Northwest Groundwater Consultants assert that there is no groundwater water flow MW01 to the North Spring. The red line and red text notation has been added by me to show the steep groundwater gradient between MW01 and the North Spring.

The NGC report claims that groundwater at North Spring located northwest of the proposed mine expansion is not hydrologically connected to the groundwater under the proposed mine or the existing mined area based on speculation that an intervening bedrock ridge redirects water flow and based on differences in water chemistry. As explained below, there is no evidence of a bedrock ridge and no difference in water chemistry that supports that claim.

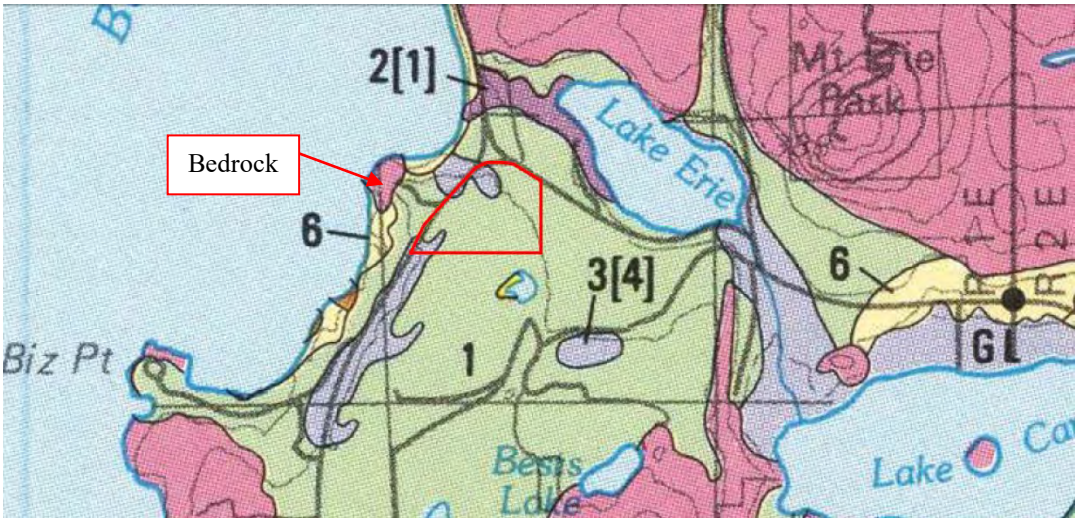
B. The NGC Report Erroneously Assumes That Bedrock Blocks Groundwater From Flowing From the Mine to the North Spring.

> NGC states that *"As previously discussed in the Geology section above, bedrock (Fidalgo ophiolite) is mapped in the northwest portion of Parcel P19158. Its presence at or near surface likely creates a no flow boundary in the northwest portion of Parcel P19158. Groundwater flow from the southwest portion of the Site likely is redirected to the central portion of the Site due to the presence of this bedrock. Because of the uncertainty to the extent of the bedrock in the subsurface, groundwater contours in this area may not reflect groundwater flow being redirected."* Page 11, last full paragraph before Discussion section.

But there is no bedrock in the northwest portion of Parcel P19158. 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.

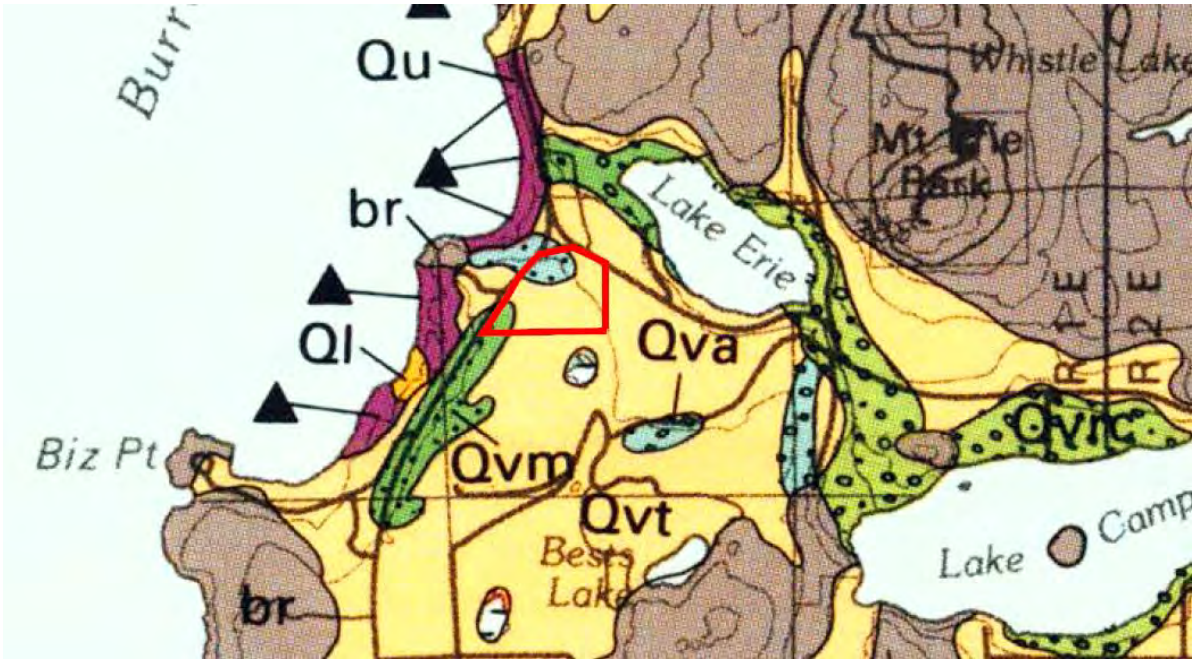
The report geology section appears to rely entirely on an on-line map from the Washington State Department of Natural Resources Geology Portal that is reproduced in the report as Figure 4. That map shows bedrock extending to the property. Unfortunately that map is incorrect in regards to the extent of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



Map showing unconsolidated deposits grouped on the basis of texture, Port Townsend 30' x 60' Quadrangle, Puget Sound region, Washington Miller and Pessel (1986), Pink = bedrock. Proposed mine is outlined in red.

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.



Portion of the Port Townsend 30- by 60-minute Quadrangle, Puget Sound Region, Washington (Pessel and others, 1989). Qvt = Vashon glacial till, Qvm = melt water deposits, Qva = Vashon glacial advance deposits, Qvrc = Vashon recessional deposits, Ql = landslide, Qu = undifferentiated glacial and non glacial deposits, Vashon glacial marine sediments, br = bedrock.

The erroneous assumption of the existence of this bedrock resulted in NGC not completing a geological hazard assessment of the bluff northwest of the mine. It should be further noted that no attempt was made to identify and map the other springs at other locations associated with landslides northwest of the mine or for that matter any other springs in the area. I pointed out three spring locations in my previous comments.

C. The Results of the Water Quality Testing Do Not Provide Meaningful Information About the Direction of Groundwater Flow.

Despite the large elevation difference between the water under the mine area and the North Spring, NGC speculates that groundwater does not flow toward the North Spring based on "distinct differences in water chemistry," stating:

> "*Although these differences in elevation suggest that the hydraulic gradient is towards the spring, analytical data discussed above indicates that there are distinct differences in water chemistry between the North Spring and that of the groundwater beneath the Site. As such, a hydrologic connection between groundwater beneath the Site and the North Spring may not exist."* Northwest Groundwater Consultants, Page 11, first full paragraph. Facet simply repeats this same speculation by ignoring the steep groundwater gradient from MW01 to the North Spring and then referencing "difference in water types." Facet, page 2, paragraph 3.

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.

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."

Facet refers to NGC's water quality sampling but does not examine the credibility of NGC's water quality claims. Instead, Facet chooses to discuss water elevations, stating that *"Figure 4 (A to A' cross-section) shows groundwater generally flows away from North Spring, on a gradient of .0023 or 12 feet/mile."* Facet, page 2, under Number 1.

But the gradient between MW01 and the North Spring is 0.0246, or approximately 130 feet/mile, ten times steeper. The highest groundwater flow velocities will follow the steepest groundwater slope or gradient.

Facet simply ignores the much steeper groundwater gradient between MW01 and the North Spring.

The water at MW01 will flow more rapidly towards the North Spring than toward the east/northeast. Further, figure 6 in the NGC report shows a slope gradient to the north from MW01 to the Devries Well of 0.0153, which is 5 times greater than the gradient towards the east.

Of the three data points down gradient of MW01, the North Spring is by far the steepest gradient indicating a much higher flow velocity in that direction; twice as high as that towards the north and 10 times higher than the flow to the east. Much more water flow will be to the northwest than to the northeast. Using the groundwater elevations at these three wells shows groundwater flow is predominantly to the northwest, not to the east.

D. The Accuracy of the Groundwater Levels Is In Question.

NGC did not identify the amount of time that elapsed between the shutting down of pumps in the wells and the time that measurements were taken—NGC states that *"Pumps installed in the private wells were not operating at the time the measurements were taken."* page 10, middle of first paragraph. The time between pumping and measuring can affect the accuracy of the water level readings. For example, if the wells have not been given sufficient time for the water levels to rise from the level reached during pumping to their static levels at rest, the results will show incorrectly that water levels are lower than the local groundwater surface. The absence of this information is critical for the accuracy of the reported water levels.

Facet recognized the importance of the lack of information about the amount of time that elapsed between shutting down the pumps and measuring the water levels, stating that, "*We note that pumps installed in the four private wells were not operating at the time water level measurements were taken. The measurements assume that water levels in the well have recovered from any recent pumping."* Facet, Page 1, third paragraph.

If the assumption that water levels were fully recovered is not correct, the reported elevations will be artificially lower than the actual groundwater elevations and distort the groundwater flow direction results.

Facet dismisses this concern based on a misunderstanding that the residential wells are located in an aquifer with *"high specific yield of sand and gravel."* Facet, Page 1, third paragraph. But the well logs in the NGC report show that the residential wells are located in finer-material that will take longer to recharge than sand and gravel:

- The Calvert Well is only screened across 92 to 96 foot depth in fine sand. Water flow is restricted to this narrow width inlet to the well through the screen length of 4 feet. Units above this narrow band are mostly clay per the well log and the unit below is clay and fine sand which will also slow the water flow and recovery time for the well.

- The Devries well is screened in a 10-foot layer of fine sand with clay layers above and below this narrow water bearing zone. Recovery of water levels is restricted to the fine sand layer.

- The Reisner well water zone is within silt and sand with silt sand and clay above this zone and silt sand below.

All of these wells had static water levels well above the water bearing zone indicated in the well log. The groundwater at the residential wells is within sediment that contains significant silt and clay contrary to the statement that the aquifer at these wells is sand and gravel. Hence, the premise put forth by Facet is not accurate and water levels in these wells may not recover rapidly and therefore the water elevations recorded may be lower than full recovery to static stable water elevations. This can result in water elevations in the wells being lower than the aquifer level and will impact the interpretation of groundwater flow direction. This uncertainty regarding water level recovery is significant enough to affect the interpretation of water flow direction between the wells.

In addition, NGC's groundwater elevation determinations are not as precise as implied in the report due to the methods used to obtain elevations.

The well elevations were not surveyed. NGC stated that "Ground surface elevations were measured with the Trimble R1 (sub-meter precision) and corrected using 3DEP LiDAR digital elevation model from the USGS." The Trimble R1 system can locate the sites with an accuracy within a meter (hence, the tern sub meter). The USGS indicates the newer elevation data used in the 3DEP model has an accuracy of 0.53 meters (about 1.75 feet) (https://www.usgs.gov/faqs/what-vertical-accuracy-3d-elevation-program-3dep-dems).

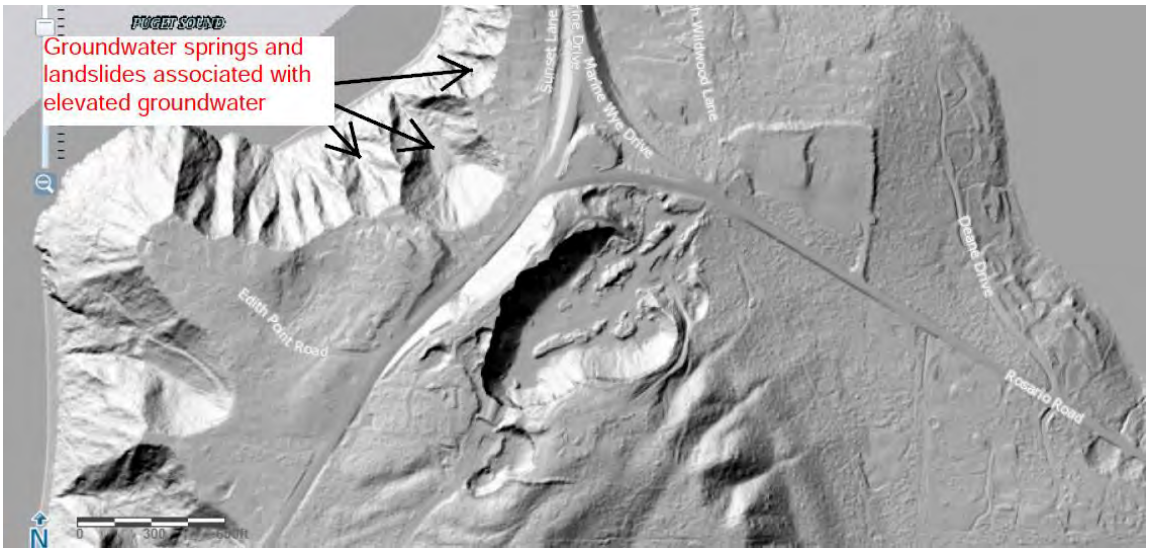
The elevation data in Table 3 is not as precise as implied and should include a +/- range to reflect the uncertainty or the uncertainty should have been discussed in the NGC report and should have been raised by Facet in their review. The +/- range is on the order of 2 to 4 feet. Given the low

difference in water levels between some of the wells this uncertainty is significant enough to affect the interpretation of water flow direction between some of the wells. That said the large difference between MW01 and the North Spring clearly shows that there is a steep groundwater gradient from MW01 to the North Spring.

In its review, Facet states *"Groundwater levels were measured following accepted protocols (Table 3)."* Facet, Page 1, middle of third paragraph. Facet does not identify the protocols it references; it has been my experience in developing accurate groundwater maps that groundwater elevation determinations utilize surveyed wells. This is particularly true when the difference in groundwater elevations is as small as seen in several of the wells at this site.

E. The 3rd-Party Report Provides Erroneous Information About the Bluff Area West of the Mine.

The figure below shows the geological context for the shoreline bluffs near the proposed mine expansion. I have visited each of these spring sites identified and evaluated the steep amphitheater-like slopes as well as the shoreline bluff area and shoreline below these slopes as well as slope areas to the north, west and southwest. Slopes above the spring areas have had recent slides and recent slides have taken place on the lower slopes below the springs. The northernmost spring area indicated on the figure below has never been identified in the previous NGC reports or in this latest NGC report. The northern spring site had a sand blowout failure at the base of the nearly vertical amphitheater wall approximately 5 years ago. The sand blowout failure was the result of high groundwater pore pressure within the dense outwash sand causing the sand to blowout forming a cave-like feature at the base of the slope.



Lidar image of groundwater induced slide areas and mine area

In discussing shoreline bluffs northwest of the proposed mine expansion, Facet does not appear to have done any ground assessment of the bluff slopes and misinterprets Keuler (1979) and Keuler (1988), the sources cited for their opinions on the bluff geology.

The following statement offers a serious misinterpretation *"The bluffs have been receding continuously for 6,000 years, retreating landward more than 740 feet since the increase in sea level following continental glaciation (Keuler, 1979)."* Facet, Page 3, last 2 paragraphs.

This statement is not consistent with Keuler (1979) or Keuler (1988). Keuler (1979) identified a bluff area to the south of Edith Point (the bluff area northwest of the mine where the North Spring is located is north of Edith Point), that he estimated had retreated approximately 325 feet over the past 5,000 years. This equates to a long-term average of 2 cm per year. Facet doubles the retreat rate that Keuler (1979) estimated. Keuler (1979 and 1988) provides no estimate of bluff retreat in the area north of Edith Point.

I am very familiar with Keuler's work as Keuler (1988) is a shoreline erosion mapping effort that covers all of the shorelines of the Port Townsend 1:100,000 Quadrangle, an area where I have conducted well over 1,000 geologic hazard assessments. I am also familiar with Keuler (1979) which is a detailed thesis on the shoreline and shoreline bluffs of Skagit County including Fidalgo Island where I have also done extensive work. Keuler (1979) and Keuler (1988) provide no long-term bluff retreat for the bluff area northwest of the mine. The reason he does not is that erosion rates along the base of the bluff at this location is very slow. He notes, I believe correctly, that top edge of the bluff retreat is driven not by wave erosion and shoreline retreat, but instead by unstable slopes impacted by groundwater.

Facet also states that,

> *"Most of the large slides visible in this image are more than 1,000 years old (Keuler, 1979)."* Fact, page 3, last paragraph.

However, Keuler did not reach such a conclusion. Keuler (1979) provided detailed observations and assessment of the amphitheater-like landforms on the bluff slopes to the northwest and west of the mine and surmised that "[t]he *amphitheaters* are old features." Keuler (1979), page 101 (emphasis added). Importantly, he does not describe the landslides in this area as old, but rather the amphitheatre-like features as old. With regard to landslides, he declares that "*Active landsliding into these amphitheaters is continuing*" and "*The amphitheaters are currently active and will continue to be active into the foreseeable future*." *Id.*

Consistent with these prognostications, I have personally observed evidence of several landslides within the amphitheater-like features north of Edith point during the 45 years since Keuler (1979) described this bluff area.

Facet also makes the following statement,

> *"The small slides are typically non-hazardous slope readjustments due to local slumps, soil creep, and surface erosion."* Facet, page 3, last paragraph.

Neither Facet nor NGC indicate that they visited the site or observed slope conditions along the bluff northwest of the mine. As noted in my previous comments, a relatively recent sand blowout feature undermined the bluff area of an amphitheater-like feature located just north of North Spring amphitheater (see picture below). This slope failure feature disproves Facet's statement. Landslide blowouts forming cave-like areas below unconsolidated sediments are very hazardous conditions, and Facet's unsupported claim that the *"The small slides are typically non-hazardous slope readjustments due to local slumps, soil creep, and surface erosion"* is highly irresponsible and dangerously misleading. It is an unacceptable practice for a geologist to make statements regarding landslides with associated safety concerns without any direct observations. Skagit County should reconsider ever using this geologist for third party reviews.

Site of recent sand blowout within sand and gravel from the groundwater aquifer springs above the silt clay layer at the bluff northwest of the mine. The springs associated with this blowout were not identified by Northwest Groundwater Consultants and the failure is not consistent with the Facet review stating *"The small slides are typically non-hazardous slope readjustments due to local slumps, soil creep, and surface erosion."*

On a final point, Facet offers the following unsupported statement,

> *"The estimated long-term bluff retreat rate is on the order of 2 to 4 cm/yr for 40 years prior to 1988 (Keuler, 1988)"* Facet, page 3, last paragraph.

Keuler (1988) does not indicate any bluff retreat rate or erosion rate at the shore area northwest

of the mine. Facet appears to be misinterpreting or is confused. Keuler (1988) does indicate the area is subject to relatively slow wave erosion and relatively small frequent landslides. He also indicates that the bluff is an area of "substantial sediment loss caused by large sporadic landslides (little or no direct wave erosion)". This is consistent with Keuler (1979), where he states "The failures almost certainly are controlled only by the stratigraphic and groundwater conditions, and are not influenced by marine erosion. The 225 m average distance of the headscarps from the beach indicates the continued activity is unrelated to marine processes." Keuler (1979) recognized that the large indentations along this bluff are not the result of shoreline erosion, but are the result of groundwater within outwash sands causing ongoing slope failures. Increased groundwater from removing the impermeable glacial till to mine the sand and gravel will result in an increase in groundwater flow to these unstable slopes leading to an increase in slope failures within the amphitheater-like landforms.

F. The NGC Report Does Not Adequately Explain Its Claim That the Mining Will Not Increase Groundwater Flow.

Although the remand order directed the applicant to assess the potential impacts of increased groundwater flow to the area northwest of the proposed mine, NGC declines to conduct such an analysis in part based on their conclusion that the mining will not increase groundwater recharge.

However, NGC asserts that the mine will not increase groundwater recharge on the grounds that "during the drilling of MW-1 and MW-2, it was observed that much of the subsurface sands and gravels were dry until drilling reached the water table." Facet does not examine this claim; that document simply states summarily that NGC assessed the general direction of groundwater flow to show no obvious hydrologic continuity with seepage from the springs. Facet, page 3, first paragraph, Review and Comment on Number 3.

There are numerous problems with NGC's assertion that there is no groundwater recharge based on the drilling observations:

1) NGC ignores or is unaware of the groundwater recharge measurements utilized and verified by the USGS in Island County, Washington (Sumioka and Bauer, 2003) and San Juan County, Washington (Or and others, 2002). For glacial outwash sediments such as those underlying the mine site, the USGS studies found groundwater recharge of 10 to 20 inches per year.

2) NGC ignores or is unaware of groundwater recharge principles regarding movement of infiltrating water through layered sand and gravel vadose zones (unsaturated soil between the ground surface and the water table). Water infiltrating through layered sand and gravel deposits can and very often does develop preferential flow paths that single borings are unlikely to encounter.

3) The MW01 well log indicated that the drillers added water at a depth of 12 feet due to

heaving sand. Heaving sands refer to sand flowing into the bore hole. Typically, this happens when saturated sands are encountered. The water pore pressure causes the sands to flow. Drillers will add water to the boring to counter the pore pressure in the sand in order to stop the saturated sand from heaving into the boring. The encountering of heaving sands in the boring for MW01 at 12 feet indicates that a wet zone was likely encountered.

4) No moisture measurements or direct samples where moisture could be measured were collected. The term dry was used in MW01 throughout until the groundwater was encountered, but this term is not quantified and may simply have been the well logger noting the sediment that was being blown out of the boring with pressurized air was not wet. Note there is a fair bit of heat generated by the heavy friction of the drilling bit as well as the friction of the sediment being blown by air up through the drill casing. This will be particularly true when drilling through gravel and rocks that the drill bit is breaking apart. There is an inconsistency between MW01 and MW02 logs in that MW01 used the term dry throughout and MW02 never used the term.

Removal of the glacial till that underlies the southern and eastern parts of the proposed mine will lead to a substantial increase in groundwater recharge to the deep aquifer under the mine site. At present, downward migration of water to the deep aquifer is mostly precluded by the dense very low permeability glacial till in the area of the proposed mine expansion. By acting as a vertical barrier, this dense till forces water to flow above it and to follow generally the surface topography that slopes to the east over much, but not all, of the proposed expansion mine area. Expansion of the mine will change the hydrology of the area around the mine by allowing infiltrated water to move vertically down to the deep aquifer and thus increasing the flow of water towards the unstable bluff slopes to the northwest.

Because NGC dismisses groundwater recharge without any explanation as to where the water goes, NGC did not evaluate changes in groundwater recharge and groundwater flow under different mine configurations. To do that, one can rely on a method developed by the United States Geologic Survey (USGS) to estimate groundwater recharge that was utilized and verified in Island County, Washington (Sumioka and Bauer, 2003) and San Juan County, Washington (Or and others, 2002). For glacial outwash sediments such as those underlying the mine site the USGS studies found groundwater recharge of 10 to 20 inches per year. This equates to 271,333 gallons to 542,666 gallons per acre.

G. Closure.

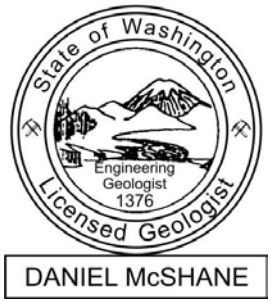
The water elevations in MW01 and North Spring clearly show a steep gradient in the groundwater towards the shoreline bluffs. Expansion of the mine will increase groundwater recharge to the mine and result in an increase of water flowing to the bluffs. It is my opinion that this will result in an increase of the frequency of saturated soils and increased high pore water pressures leading to an increase in the frequency of slope failures.

I fully concur with Keuler (1979) "The failures almost certainly are controlled only by the stratigraphic and groundwater conditions, and are not influenced by marine erosion. The 225 m average distance of the headscarps from the beach indicates the continued activity is unrelated to marine processes." Adding addition groundwater to these bluffs poses a hazard and increases the risk to properties above the slope failures areas.

Thank you for considerations of these comments.

Sincerely yours,
Stratum Group

Dan McShane, L.E.G., M.Sc.
Licensed Engineering Geologist



References:

Facet, 2024, Lake Erie Pit Groundwater Evaluation. Memo to Skagit County Planning

Keuler, R.F., 1979, Coastal zone processes and geomorphology of Skagit County Washington. Master's thesis, Western Washington University, Bellingham, WA. 123 p.

Keuler, R. F., 1988, Map showing coastal erosion, sediment supply, and longshore transport in the Port Townsend 30- by 60-minute quadrangle, Puget Sound Region, Washington, Miscellaneous Investigations Map 1198-E, United States Geological Survey.

Miller, R.D. and F. Pessel, Jr., 1986, Map showing unconsolidated deposits grouped on the basis of texture, Port Townsend 30' x 60' Quadrangle, Puget Sound region, Washington. USGS Miscellaneous Investigations Series, Map I-1198-D, scale 1:100,000.

Northwest Groundwater Consultants, 2024, Lake Erie Pit Groundwater Evaluation.

Orr, L.A., Bauer, H.H., and Wayenberg, J.A., 2003, Estimates of Ground-Water Recharge from Precipitation to Glacial-Deposit and Bedrock Aquifers on Lopez, San Juan, Orcas, and Shaw Islands, San Juan County, Washington. Prepared in cooperation with the San Juan County Heath and Community Services Department, United States Geological Survey, Water-Resources Investigations Report 03-4101.

Pessel, F.Jr., Dethier, D.P., Booth, D.B., and Minard, J.P. 1989, Surficial Geologic Map of the Port Townsend 30' x 60' Quadrangle, Puget Sound region, Washington. Folio of the Port Townsend Quadrangle, Washington Miscellaneous Investigations Series, Map I-1198-F.

Sumioka, S.S. and Bauer, H.H. 2004, Estimating Ground-Water Recharge from Precipitation on Whidbey and Camano Islands, Island County, Washington, Water Years 1998 and 1999. Prepared in cooperation with the Island County Heath Department, United States Geological Survey, Water-Resources Investigations Report 03-4101, Version Number 1.20, August 2004.

ATTACHMENT B

Canyon Environmental Group LLC
112 Ohio Street, Suite 115
Bellingham, WA 98225

September 7, 2021

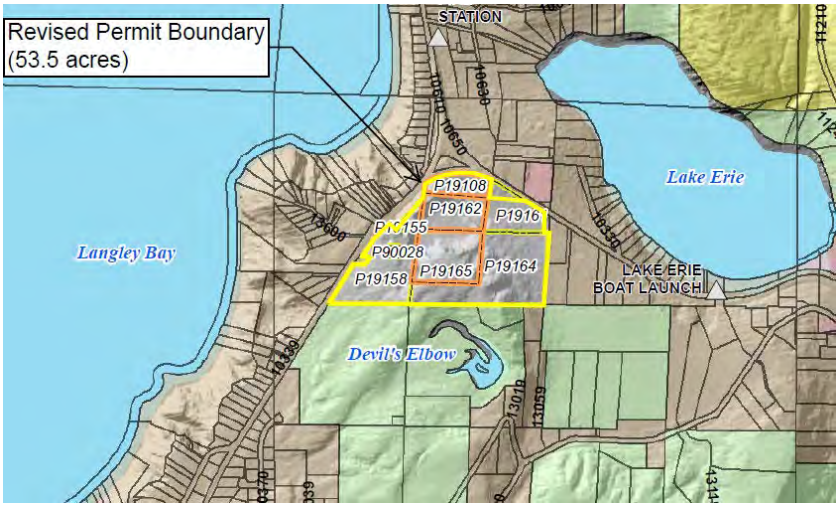
Prepared For:	McLucas & Associates Inc. c/o Steve Taylor P.O. Box 5352 Lacey, Wash509 s.l.taylor7117@gmail.com
Subject:	Skagit County Hearing Examiner Request for Additional Information (PL16-0556): Proposed Hydrogeology and Groundwater Characterization Timeline
Project Locations:	Skagit County Tax Parcels P19108, P19162, P19161, P19155, P90028, P19158, P19165, and P19164.

Dear Steve Taylor,

This scope of work and time estimate have been prepared by Canyon Environmental Group LLC (Canyon) at the request of Steve Taylor and McLucas & Associates Inc. This document covers the proposed hydrogeological and groundwater characterization services the Lake Erie Gravel Mine and is meant to help inform the permit and regulatory review associated with the proposed mine expansion. Specifically, this scope is meant to help refine the understanding of groundwater and perched groundwater flow within the subject parcels and help address if changes to groundwater flow will affect the geohazard conditions in the close vicinity. This scope does not include a geohazard study, but the report generated by this scope of work will help inform the geologist that works on the geohazard study.

Study Area

The "Study Area" is defined as the subject parcel(s), shown below in yellow.



Outline of Scope of Work

Overview

The scope of services for this task are to perform hydrogeological services per the best available science and Skagit County Code to help characterize groundwater and groundwater flow directions related to existing conditions and the proposed mine expansion.

This study will include but not be limited to field visits to document existing surface conditions, extensive desktop review of existing geologic mapping and pre-existing studies and documents, topographical analysis, supervision of well installations, grainsize analysis, wet season groundwater monitoring, precipitation monitoring, wet season borehole and perched water evaluation, groundwater modeling/analysis, and report compilation. A report meeting professional standards will be provided with the study's findings and recommendations.

TASK 1: Desktop and Existing Study Evaluation

The currently available public information and previous studies conducted on and near the study area related to geologic conditions, mining operations and planning documents, groundwater movement and/well installations will be reviewed for relevant information. Information gleaned from the databases and studies will be written up in a summary memo.

Estimated:

- Desktop Review (2-3 weeks)

TASK 2: Field Investigations, Well Installations, Limited Soil Characterization, and Grain Size Analysis

This scope of work will be performed by qualified Canyon personnel, who will conduct site visits to document, describe, and characterize the conditions on-site with the intent to gather information that can be used to inform this hydrogeology study, groundwater well placement locations, and eventual geohazard study. During this task, three to four permanent groundwater monitoring wells will be installed. Canyon employees will evaluate the well boring for subsurface geology and groundwater conditions to determine groundwater and subsurface hydrological properties, including grain-size and redoximorphic features, evaluate depth to groundwater, and identify any potentially restrictive layers. Well installation should occur at the earliest possible time to gather as much of the rainy season as possible, preferably before the end of October.

Soil infiltration characteristics and site uniformity will be assessed using the Grain Size Analysis method (D422/D1140 sieve analysis to determine grain size distribution of the sample and C136/C117 method sieve analysis to correlate soil types).

Information gained from Task 2 will be used in the final Hydrogeological Report.

Estimated:

- Field investigation (3-days)

- Well installation
    - Possibly access clearing for wells (2-3 weeks)
    - Coordination with well drillers (8-weeks)
        - Clients will have to hire well drillers independently of Canyon
    - Supervision of well installation (3-4 days)
    - Survey of well location (1 day)
        - Client will have to hire professional surveyors independently of Canyon
- Grainsize Analysis (7-10 days)

TASK 3: Wet Season Water Table Monitoring

Once the monitoring wells have been installed, the depth to groundwater will be monitored both digitally and manually throughout the wet season (October to May/June). The digital monitoring will be conducted using direct read Solisnt™ pressure transducers which will collect measurements every 1-3 hours. Additionally onsite rain gauges will be installed and monitored to aid in the groundwater characterization and modeling. The digital DTW and precipitation data will be collected monthly along with manual depth to water (DTW) measurements.

Estimated:

- Wet season DTW measurements (8-9 months)

TASK 4: Wet Season Field Observation and Borehole Evalaution

During the height of the wet season (March or April), two additional temporary bore holes will be drilled along the western boundary of the Study Area. In addition to manual observation of the drilling operation, downhole geophysics well profiling probes will be used to analyze for the presence and quantity of groundwater. This data collection will be used to evaluate if perched water tables are potentially present onsite and if they are potentially a source for the seeps known to exist west of the Study Area.

Wet season field assessments and characterization will be conducted within the Study Area. Additionally field assessment will be conducted on the slopes west of the Study Area but will be limited to areas where access is granted to Canyon field staff.

Estimated:

- Borehole drilling
    - Coordination with well drillers (8-weeks)
        - Will occur in March or April
        - Clients will have to hire well drillers independent of Canyon
    - Supervision of well installation (1-2 days)
- Survey of well location (1 day)
    - Client will have to hire professional surveyors independently of Canyon
- Borehole Geophysics Well Profiling (1-2 days)
    - Client will have to hire the well profiling company independently of Canyon

TASK 5: Groundwater Modeling and Report

Once the field data has been gathered, groundwater modeling of the Study Area will be conducted to evaluate the groundwater flow direction and potential groundwater impacts and implications of the proposed gravel mine expansion. The results of the field data and groundwater evaluation will be written in a Hydrogeologic Assessment Report which will discuss our findings, results, and recommendations. This report and field data will be given to the geologist conducting the geohazard assessment to inform their study.

Estimated:

- Groundwater Modeling (2-3 months)
- Hydrogeologic Assessment Report (2 months)

Summary of Estimated Schedule and Timeline

In summary if the above proposed scope of work were started on October 1st it is estimated that the whole project would take approximately 1 year. The table below shows the timeline and schedule for each of the tasks and subtasks discussed above.

	2021						2022																	
TASK	Oct		Nov		Dec		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct	
Task 1: Desktop Evaluation																								
Task 2: Field Studies																								
Site Visit																								
Well Drilling																								
Surveying																								
Grainsize Analysis																								
Task 3: Water Table Monitoring																								
Task 4: Wet Season Evaluation																								
Site Visits																								
Borehole Evaluation																								
Task 5: Modeling and Reports																								
Groundwater Modeling																								
Report Compliation																								

For questions, scheduling arrangements, or inquiries about additional services we may be able to provide for your or your project, please contact us at (360) 389-1693. Thank you in advance for the opportunity to work with you.

Sincerely,

Jeff Ninnemann

Jeff Ninnemann, LHG, PWS.
Hydrogeologist/Wetland Ecologist/Environmental Geologist - Principal
jeff@canyonenv.org
www.canyonenv.org

EXHIBIT #55

LORING ADVISING/EVERGREEN ISLAND'S, REMAND REQUESTS UNADDRESSED LETTER, DATED: JUNE 23, 2023

LORING ADVISING

By Email

June 23, 2023

Skagit County Hearing Examiner
Skagit County Planning and Development Services
1800 Continental Place
Mount Vernon, WA 98273
corir@co.skagit.wa.us

Re: File No. PL16-0056 – Remand Requests Unaddressed

Dear Skagit County Hearing Examiner,

Evergreen Islands ("Evergreen") respectfully submits these comments to point out that the applicant in PL16-0556 has not conducted the evaluations that Skagit County required upon remand and to request that the Hearing Examiner continue to require the applicant to investigate whether his proposed mine would destabilize the shoreline bluffs on which the neighborhoods to the west and northwest of the site rely. Although Evergreen raised this issue in response to the applicant's August 2022 letter by Wood Environment & Infrastructure Solutions ("Wood") and The Watershed Company's January 18, 2023 letter, it has been ignored to date.[1] The glaring flaw in all of the applicant and County activity that has occurred since the matter was remanded for more study is the lack of any new information about groundwater flows downgradient toward the west and northwest of the proposed mine. This information was central to the remand. In addition to directly disregarding the County's request for information, the lack of inquiry into the groundwater question callously ignores the very real danger that the project poses to neighboring residents. The June 28 hearing is premature, and this omission must be corrected.

The following sections summarize the procedural history in this matter, the information that the County requested on remand, and the ongoing absence of that information from the record.

A. Board of Commissioners Remand.

While this matter has a somewhat lengthy history, the issue presently before the Hearing Examiner is whether the applicant has provided information to address a landslide risk as required by the Board of County Commissioners in resolving a successful appeal by

[1] Evergreen Islands' earlier response letters are attached as Exhibits F and G to this letter.

Evergreen in 2021.[2] In their February 23, 2021 decision, the Commissioners found that Evergreen had provided evidence of springs in the coastal bluffs northwest of the proposed mine at an elevation downgradient of the inferred groundwater level of the mine site, and that Mr. McShane had opined that the expanded mine would create an increased risk of landslide. Notwithstanding that the coastal bluff west and northwest of the site is a geologically hazardous area, County staff had not required a geologically hazardous site assessment based on an inference from an applicant report that groundwater flowed to the northeast of the mine site; the applicant report had not realized that the bluffs contained springs downgradient of the groundwater at the site. The Commissioners therefore remanded the application to the Skagit County Hearing Examiner to consider whether the steep area to the west/northwest warranted a geohazard assessment and to take additional evidence and impose additional conditions as needed to mitigate risks revealed by the geohazard assessment.

B. Evaluation Required by Skagit Planning & Development Services.

On March 23, 2021, in response to the Commissioners' decision, Skagit County Planning & Development Services ("PDS") directed Mr. Wooding to address three specific issues:

- Analyze the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion and attendant removal of soil and vegetation which could alter groundwater behavior in the vicinity of the mine;

- Analyze the presence of springs on the coastal bluff to the northwest of the mine that are at an elevation down gradient of the inferred groundwater level; and

- Respond to the testimony of the professional geologist who identified that the proposed mine expansion will create an increased landslide risk.[3]

It is particularly notable that all of this required information relates to the mine's potential to alter groundwater flow to the coastal bluffs west and northwest of the mine yet, as explained below, the applicant's new report fails to do so. On May 27, 2021, PDS transmitted a letter to Mr. Wooding to notify him that he needed to submit the additional information by July 21, 2021 to avoid having his application denied. Mr. Wooding failed to meet that deadline, but appealed PDS' subsequent denial due to inaction and convinced the Hearing Examiner to grant an extension to supply that information. The Hearing Examiner noted in reversing PDS that

[2] Skagit County Resolution # R20210038 (attached hereto as Exhibit A).
[3] Letter from Michael Cerbone to Bill Wooding re: Hearings Examiner Referral of PL16-0556 to Skagit County Planning & Development Services (March 23, 2021) (attached hereto as Exhibit B).

Wooding was under contract with Canyon Environmental Services ("Canyon") to explore groundwater flow toward the bluffs to the northwest.

C. Applicant's Failure to Conduct Required Evaluation.

Between October 2021, when the Hearing Examiner reversed the denial, and August 2022, when Wooding submitted a report, he inexplicably switched consulting companies, abandoning Canyon. This resulted in a report that failed to address the remand issues related to potential changes in groundwater flow. Canyon had proposed to conduct a hydrogeological and groundwater characterization meant to help refine the understanding of groundwater and perched groundwater flow.[4] This investigation would have involved field visits to document existing surface conditions, extensive desktop review of existing geologic mapping and pre-existing studies and documents, topographical analysis, supervision of well installations, grainsize analysis, wet season groundwater monitoring, precipitation monitoring, wet season borehole and perched water evaluation, groundwater modeling/analysis, and report compilation. However, Canyon never conducted that study or prepared a report.

Instead, the applicant subsequently hired Wood, which did not address the issues remanded to the applicant and failed to provide any new information about groundwater. The Wood document expressly deferred to earlier reports that had not recognized the downgradient seeps to the northwest, and which had thus been deemed deficient by the Commissioners, stating that "[t]he previous hydrogeologic studies…provide detailed information regarding the groundwater elevation, groundwater flow direction, and concludes that the mining operation is unlikely to have any impact on the groundwater."[5] Then, rather than studying the geologically hazardous unstable bluffs to the west and northwest, that document analyzed slope stability within the mine site itself, though that issue had not been raised by any party. With regard to the coastal bluffs, the Wood document acknowledged that groundwater seepage might affect the neighboring coastal bluffs, but then erroneously declared that the deficient groundwater documents had addressed that issue. The Wood document did not indicate any understanding of the previous appeal and remand request by PDS.

D. Third-party Consultant Continues to Ignore Spring Elevation West/Northwest of Site.

While PDS appears to have hired The Watershed Company to review the Wood

[4] Canyon Environmental Group LLC, proposal for Skagit County Hearing Examiner Request for Additional Information (PL16-0556): Proposed Hydrogeology and Groundwater Characterization Timeline (Sept. 7, 2021) (attached hereto as Exhibit C).

[5] Wood, Geologic Hazard Site Assessment, Lake Erie Pit 1 Expansion, at 3.

document, they committed the same error by deferring to the groundwater reports that had already been deemed to be flawed. The Watershed document referred to bluffs with springs at an elevation of 200 feet, without recognizing that the seeps and springs investigated and mapped by McShane occur at an elevation between 165 and 175 feet, well below the 190 feet that the applicant's own studies had found for the groundwater level at the site. The Watershed document does not explain why it did not acknowledge the lower groundwater elevations to the west and northwest of the site, or why it assumed that groundwater flows to the north/northeast of the site without a study of the hydrogeological connectivity between the higher groundwater at the site and the lower groundwater discharge west and northwest of the site.

E. McShane's Expert Opinion That Landslide Risk Still Has Not Been Evaluated.

After reviewing the Wood document, Dan McShane, the licensed engineering geologist and the expert who diagnosed the flaws in the initial groundwater review for the proposed Lake Erie gravel pit, concluded that it did not assess the stability of the shoreline bluff.[6] Nor did the report address the potential for altering groundwater, or study the effects of that alteration on the stability of the shoreline bluff.

Mr. McShane also reviewed the third-party report that ignored the lack of analysis of impacts to the bluffs to the west/northwest, concluding that: "I remain very concerned about the potential impacts to groundwater levels and the stability of the bluffs to the northwest of the mine in the absence of an assessment of the mine's impacts on those areas."[7]

Mr. McShane reached this conclusion after identifying the following flaws in the Wood document and earlier groundwater reviews:

- The Wood document does not identify or discuss the springs on the bluffs to the northwest of the proposed mine in its review of the earlier reports. These springs, which have never been evaluated notwithstanding that they lie downgradient of the mine, were the primary reason that the Skagit Board of Commissioners reversed Hearing Examiner approval of the mine. Mr. McShane notes that if recharge to groundwater that feeds these springs is increased, the frequency and magnitude of groundwater-driven landslides will increase. Nonetheless, the Response makes no reference to them, instead

[6] Stratum Group Memorandum re: Proposed Lake Erie Pit Expansion: Comments Regarding Geologic Hazard Site Assessment (November 15, 2022) (attached hereto as Exhibit D).
[7] Stratum Group Memorandum re: Response to: The Watershed Company Response to Evergreen Islands communication of 11/18/2022, 3 (March 2, 2023) (attached hereto as Exhibit E).

discussing unstable slopes to the west and southwest of the proposed mine.

- There are significant discrepancies in the groundwater elevations identified by different applicant reports. While the Response asserts that no significant discrepancies or inaccuracies were found in the data, the water levels measured directly by Northwest Groundwater Consultants were 50 feet and 35 feet lower than those identified on the groundwater contour map produced by Maul Foster Alongi in 2016 and 2017. This large discrepancy casts doubt on the accuracy of the elevations the application presumed for the other wells that were not directly measured.

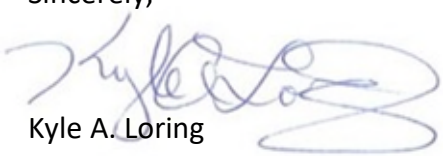
- The groundwater flow and potential changes to the groundwater flow toward the unstable bluffs has not been evaluated. Ultimately, there are no data regarding groundwater elevations between the proposed mine and the unstable bluffs to the northwest of the mine.

F. Conclusion.

The applicant continues to avoid investigating groundwater flows from the mine site to the downgradient seeps and springs in the coastal bluffs west and northwest. Neither The Watershed Group nor the County staff report acknowledge this omission, ignoring the issue altogether by failing to compare the information PDS has received with the information that they requested. Consequently, the project must be denied until Mr. Wooding provides this information.

If you have any questions, please do not hesitate to contact me at 360-622-8060 or kyle@loringadvising.com.

Sincerely,



Kyle A. Loring

Cc: Tom Glade, Evergreen Islands
Kevin Cricchio, Skagit PDS

EXHIBIT A

RESOLUTION # ___

A Resolution Pertaining to the Closed Record Appeal Before the Skagit County Board of Commissioners Of Special Use Permit PL16-0556

WHEREAS, Evergreen Islands ("**Appellant**") timely filed this closed record appeal to the Board of Skagit County Commissioners (hereinafter, the "**Board**"), pursuant to Skagit County Code ("**SCC**") 14.06, challenging the Skagit County Hearing Examiner's Decision approving Special Use Permit PL16-0556 (the "**Permit**"); and

WHEREAS, the Permit authorizes the expansion of an existing 17.78 acre gravel mine located on the west side of Fidalgo Island to an ultimate size of 53.5 acres (hereinafter, the "**Mine**"); and

WHEREAS, County Planning staff did not require a Geologically Hazardous Site Assessment associated with the steep coastal area located to the west/northwest of the Mine, based principally on an inference derived from reports furnished by a professional hydrogeologist on the Applicant's behalf to the effect that groundwater at the Mine flows to the northeast, toward Lake Erie; and

WHEREAS, the Appellant timely raised concerns before the Hearing Examiner regarding potential landslide risk arising from the potential for increased groundwater migration to the west/northwest, due to the Mine's expansion and attendant removal of soil and vegetation, which, the Appellant contends, will alter groundwater behavior in the vicinity of the Mine; and

WHEREAS, the Appellant furnished evidence to the Hearing Examiner regarding the presence of springs on the coastal bluff to the northwest of the Mine at an elevation downgradient of the inferred groundwater level, and the testimony of a geologist who opined that the expanded Mine will create an increased landslide risk; and

WHEREAS, the Appellant contends that the coastal bluff area to the west/northwest of the Mine is a geologically hazardous area pursuant to SCC 14.24.410; and

WHEREAS, in light of the foregoing, the Appellant contends on this appeal that the Hearing Examiner erred, in part, by failing to require a Geologically Hazardous Site Assessment pursuant to SCC 14.24.420; and

WHEREAS, pursuant to SCC 14.06.170(10), the Board may take one of the following actions:

(1) Deny the appeal and affirm the decision of the Hearing Examiner;

(2) Find the Hearing Examiner's decision clearly erroneous, adopting its own findings, conclusions and decision based on the record before it; or

(3) Remand the matter for further consideration by the Hearing Examiner.

NOW, THEREFORE, BE IT RESOLVED:

1. Pursuant to SCC 14.60.170(10)(3), 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.

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

WITNESS OUR HANDS AND THE OFFICIAL SEAL OF OUR OFFICE this 23rd day of February 2021.

BOARD OF COUNTY COMMISSIONERS
SKAGIT COUNTY, WASHINGTON

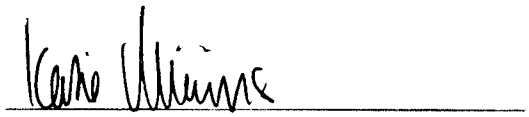
SKAGIT COUNTY COMMISSIONERS SEAL COURT STATE OF WASHINGTON

Lisa Janicki, Chair

Peter Browning, Commissioner

Ron Wesen, Commissioner

ATTEST:



Clerk of the Board

APPROVED AS TO FORM:

Will Honea, Senior Civil Deputy
Skagit County Prosecutor's Office

EXHIBIT B

SKAGIT COUNTY PLANNING & DEVELOPMENT SERVICES

Bill Wooding
Lake Erie Pit, LLC

March 23, 2021

RE: Hearings Examiner Referral of PL16-0556 to Skagit County Planning & Development Services

Mr. Wooding,

Please find attached a copy of the remand from the Board of County Commissioners as well as a copy of the Order that the Hearings Examiner sent deferring the next steps to Skagit County Planning and Development Services (PDS). Per the direction of the Hearings Examiner the applicant shall prepare a Geologically Hazardous Area Site Assessment associated with the steep coastal area located to the west/northwest of the mine pursuant to Skagit County Code (SCC) 14.24.420 and prepare a Geologically Hazardous Mitigation Area Plan pursuant to Skagit County Code 14.24.430.

SCC 14.24.420(2)(g) allows the Administrative Official to require additional site assessment elements as may be required. In addition to the elements required by SCC 14.24.420, PDS is requesting the assessment specifically address the concerns raised by the Board of County Commissioners' in their remand. Those specifc site assessment elements to be addressed within the assessment are as follows:

- Analyze the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion and attendant removal of soil and vegetation which could alter groundwater behavior in the vicinity of the mine.
- Analyze the presence of springs on the coastal bluff to the northwest of the mine that are at an elevation down gradient of the inferred groundwater level.
- Respond to the testimony of the professional geologist who identified that the proposed mine expansion will create an increased landslide risk.

Please let me know if you have any questions.

Respectfully,

Michael Cerbone
Assistant Director
Skagit County Planning and Development Services

Cc: Parties of record, Skagit County Hearings Examiner, Skagit County Board of County Commissioners

BEFORE THE SKAGIT COUNTY HEARING EXAMINER

In the Matter of a Special Use Permit To Expand an Existing Gravel Mine	))	PL16-0556
BILL WOODING **LAKE ERIE PIT, LLC** Applicant.	))))	**REFERRAL TO PLANNING AND DEVELOPMENT SERVICES**

On the appeal of Evergreen Islands, the Skagit County Commissioners remanded this matter to the Skagit County Hearing Examiner for further consideration of the following:

- 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 14.24.200-.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.

After consideration of the above directions, the Examiner has determined that the appropriate course now is to refer this matter to Planning and Development Services (PDS) with instructions to direct the Applicant to cause a Geologically Hazardous Site Assessment to be prepared and submitted to PDS.

On receipt of such assessment, PDS shall review it and provide an Amended Staff Report to the Hearing Examiner containing the department's analysis and recommendations in light of the report.

Thereafter, the Examiner shall schedule and hold a supplementary public hearing in this matter, limited to comment on the Geologically Hazardous Site Assessment. Following this hearing, based on the record made, the Examiner shall issue a decision imposing such additional conditions, if any, as may be necessary to mitigate risks that have been identified.

SO ORDERED, this 9th day of March, 2021.

Wick Dufford, Hearing Examiner

Transmitted to: County Commissioners, Applicant, Planning and Development Services, Evergreen Islands on March 9, 2021.

RESOLUTION # ___

A Resolution Pertaining to the Closed Record Appeal Before the Skagit County Board of Commissioners Of Special Use Permit PL16-0556

WHEREAS, Evergreen Islands ("**Appellant**") timely filed this closed record appeal to the Board of Skagit County Commissioners (hereinafter, the "**Board**"), pursuant to Skagit County Code ("**SCC**") 14.06, challenging the Skagit County Hearing Examiner's Decision approving Special Use Permit PL16-0556 (the "**Permit**"); and

WHEREAS, the Permit authorizes the expansion of an existing 17.78 acre gravel mine located on the west side of Fidalgo Island to an ultimate size of 53.5 acres (hereinafter, the "**Mine**"); and

WHEREAS, County Planning staff did not require a Geologically Hazardous Site Assessment associated with the steep coastal area located to the west/northwest of the Mine, based principally on an inference derived from reports furnished by a professional hydrogeologist on the Applicant's behalf to the effect that groundwater at the Mine flows to the northeast, toward Lake Erie; and

WHEREAS, the Appellant timely raised concerns before the Hearing Examiner regarding potential landslide risk arising from the potential for increased groundwater migration to the west/northwest, due to the Mine's expansion and attendant removal of soil and vegetation, which, the Appellant contends, will alter groundwater behavior in the vicinity of the Mine; and

WHEREAS, the Appellant furnished evidence to the Hearing Examiner regarding the presence of springs on the coastal bluff to the northwest of the Mine at an elevation downgradient of the inferred groundwater level, and the testimony of a geologist who opined that the expanded Mine will create an increased landslide risk; and

WHEREAS, the Appellant contends that the coastal bluff area to the west/northwest of the Mine is a geologically hazardous area pursuant to SCC 14.24.410; and

WHEREAS, in light of the foregoing, the Appellant contends on this appeal that the Hearing Examiner erred, in part, by failing to require a Geologically Hazardous Site Assessment pursuant to SCC 14.24.420; and

WHEREAS, pursuant to SCC 14.06.170(10), the Board may take one of the following actions:

(1) Deny the appeal and affirm the decision of the Hearing Examiner;

(2) Find the Hearing Examiner's decision clearly erroneous, adopting its own findings, conclusions and decision based on the record before it; or

(3) Remand the matter for further consideration by the Hearing Examiner.

NOW, THEREFORE, BE IT RESOLVED:

1. Pursuant to SCC 14.60.170(10)(3), 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.

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

WITNESS OUR HANDS AND THE OFFICIAL SEAL OF OUR OFFICE this 23rd day of February 2021.

BOARD OF COUNTY COMMISSIONERS
SKAGIT COUNTY, WASHINGTON

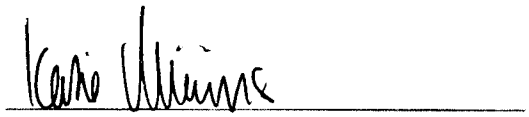
SKAGIT COUNTY COMMISSIONERS SEAL COURT STATE OF WASHINGTON

Lisa Janicki, Chair

Peter Browning, Commissioner

Ron Wesen, Commissioner

ATTEST:



Clerk of the Board

APPROVED AS TO FORM:

Will Honea, Senior Civil Deputy
Skagit County Prosecutor's Office

EXHIBIT C

Canyon Environmental Group LLC
112 Ohio Street, Suite 115
Bellingham, WA 98225

September 7, 2021

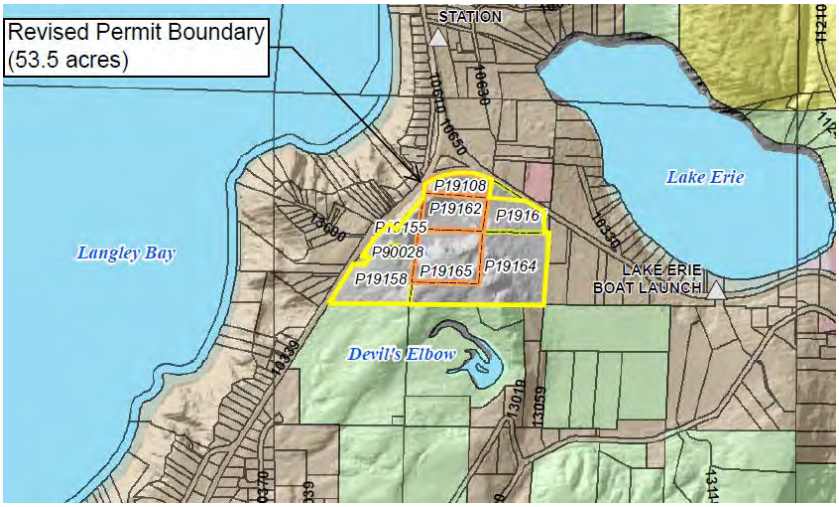
Prepared For:	McLucas & Associates Inc. c/o Steve Taylor P.O. Box 5352 Lacey, Wash509 s.l.taylor7117@gmail.com
Subject:	Skagit County Hearing Examiner Request for Additional Information (PL16-0556): Proposed Hydrogeology and Groundwater Characterization Timeline
Project Locations:	Skagit County Tax Parcels P19108, P19162, P19161, P19155, P90028, P19158, P19165, and P19164.

Dear Steve Taylor,

This scope of work and time estimate have been prepared by Canyon Environmental Group LLC (Canyon) at the request of Steve Taylor and McLucas & Associates Inc. This document covers the proposed hydrogeological and groundwater characterization services the Lake Erie Gravel Mine and is meant to help inform the permit and regulatory review associated with the proposed mine expansion. Specifically, this scope is meant to help refine the understanding of groundwater and perched groundwater flow within the subject parcels and help address if changes to groundwater flow will affect the geohazard conditions in the close vicinity. This scope does not include a geohazard study, but the report generated by this scope of work will help inform the geologist that works on the geohazard study.

Study Area

The "Study Area" is defined as the subject parcel(s), shown below in yellow.



Outline of Scope of Work

Overview

The scope of services for this task are to perform hydrogeological services per the best available science and Skagit County Code to help characterize groundwater and groundwater flow directions related to existing conditions and the proposed mine expansion.

This study will include but not be limited to field visits to document existing surface conditions, extensive desktop review of existing geologic mapping and pre-existing studies and documents, topographical analysis, supervision of well installations, grainsize analysis, wet season groundwater monitoring, precipitation monitoring, wet season borehole and perched water evaluation, groundwater modeling/analysis, and report compilation. A report meeting professional standards will be provided with the study's findings and recommendations.

TASK 1: Desktop and Existing Study Evaluation

The currently available public information and previous studies conducted on and near the study area related to geologic conditions, mining operations and planning documents, groundwater movement and/well installations will be reviewed for relevant information. Information gleaned from the databases and studies will be written up in a summary memo.

Estimated:

- Desktop Review (2-3 weeks)

TASK 2: Field Investigations, Well Installations, Limited Soil Characterization, and Grain Size Analysis

This scope of work will be performed by qualified Canyon personnel, who will conduct site visits to document, describe, and characterize the conditions on-site with the intent to gather information that can be used to inform this hydrogeology study, groundwater well placement locations, and eventual geohazard study. During this task, three to four permanent groundwater monitoring wells will be installed. Canyon employees will evaluate the well boring for subsurface geology and groundwater conditions to determine groundwater and subsurface hydrological properties, including grain-size and redoximorphic features, evaluate depth to groundwater, and identify any potentially restrictive layers. Well installation should occur at the earliest possible time to gather as much of the rainy season as possible, preferably before the end of October.

Soil infiltration characteristics and site uniformity will be assessed using the Grain Size Analysis method (D422/D1140 sieve analysis to determine grain size distribution of the sample and C136/C117 method sieve analysis to correlate soil types).

Information gained from Task 2 will be used in the final Hydrogeological Report.

Estimated:

- Field investigation (3-days)

- Well installation
    - Possibly access clearing for wells (2-3 weeks)
    - Coordination with well drillers (8-weeks)
        - Clients will have to hire well drillers independently of Canyon
    - Supervision of well installation (3-4 days)
    - Survey of well location (1 day)
        - Client will have to hire professional surveyors independently of Canyon
- Grainsize Analysis (7-10 days)

TASK 3: Wet Season Water Table Monitoring

Once the monitoring wells have been installed, the depth to groundwater will be monitored both digitally and manually throughout the wet season (October to May/June). The digital monitoring will be conducted using direct read Solisnt™ pressure transducers which will collect measurements every 1-3 hours. Additionally onsite rain gauges will be installed and monitored to aid in the groundwater characterization and modeling. The digital DTW and precipitation data will be collected monthly along with manual depth to water (DTW) measurements.

Estimated:

- Wet season DTW measurements (8-9 months)

TASK 4: Wet Season Field Observation and Borehole Evalaution

During the height of the wet season (March or April), two additional temporary bore holes will be drilled along the western boundary of the Study Area. In addition to manual observation of the drilling operation, downhole geophysics well profiling probes will be used to analyze for the presence and quantity of groundwater. This data collection will be used to evaluate if perched water tables are potentially present onsite and if they are potentially a source for the seeps known to exist west of the Study Area.

Wet season field assessments and characterization will be conducted within the Study Area. Additionally field assessment will be conducted on the slopes west of the Study Area but will be limited to areas where access is granted to Canyon field staff.

Estimated:

- Borehole drilling
    - Coordination with well drillers (8-weeks)
        - Will occur in March or April
        - Clients will have to hire well drillers independent of Canyon
    - Supervision of well installation (1-2 days)
- Survey of well location (1 day)
    - Client will have to hire professional surveyors independently of Canyon
- Borehole Geophysics Well Profiling (1-2 days)
    - Client will have to hire the well profiling company independently of Canyon

TASK 5: Groundwater Modeling and Report

Once the field data has been gathered, groundwater modeling of the Study Area will be conducted to evaluate the groundwater flow direction and potential groundwater impacts and implications of the proposed gravel mine expansion. The results of the field data and groundwater evaluation will be written in a Hydrogeologic Assessment Report which will discuss our findings, results, and recommendations. This report and field data will be given to the geologist conducting the geohazard assessment to inform their study.

Estimated:

- Groundwater Modeling (2-3 months)
- Hydrogeologic Assessment Report (2 months)

Summary of Estimated Schedule and Timeline

In summary if the above proposed scope of work were started on October 1st it is estimated that the whole project would take approximately 1 year. The table below shows the timeline and schedule for each of the tasks and subtasks discussed above.

	2021						2022																	
TASK	Oct		Nov		Dec		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct	
Task 1: Desktop Evaluation																								
Task 2: Field Studies																								
Site Visit																								
Well Drilling																								
Surveying																								
Grainsize Analysis																								
Task 3: Water Table Monitoring																								
Task 4: Wet Season Evaluation																								
Site Visits																								
Borehole Evaluation																								
Task 5: Modeling and Reports																								
Groundwater Modeling																								
Report Compliation																								

For questions, scheduling arrangements, or inquiries about additional services we may be able to provide for your or your project, please contact us at (360) 389-1693. Thank you in advance for the opportunity to work with you.

Sincerely,

Jeff Ninnemann

Jeff Ninnemann, LHG, PWS.
Hydrogeologist/Wetland Ecologist/Environmental Geologist - Principal
jeff@canyonenv.org
www.canyonenv.org

EXHIBIT D

STRATUM GROUP
PO Box 2546, Bellingham, Washington 98227

November 15, 2022

Re: **Proposed Lake Erie Pit Expansion**
Comments Regarding Geologic Hazard Site Assessment

I reviewed the Wood Geologic Hazard Site Assessment for the proposed Lake Erie Pit expansion (dated August 11, 2022). The assessment does not address any of the areas outlined in the Skagit County Planning and Development Services (PDS) letter to Lake Erie LLC (dated March 21, 2021).

PDS requested that the assessment include three specific items:

1) "Analyze the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion and attendant removal of soil and vegetation which could alter groundwater behavior in the vicinity of the mine."

> The potential groundwater flow direction was not analyzed in the report. The report only references the previous reports that also did not analyze the groundwater flow direction towards the shoreline bluff.

2) "Analyze the presence of springs on the coastal bluff to the northwest of the mine that are at an elevation down gradient of the inferred groundwater level."

> The springs on the shoreline bluffs to the west and northwest of the pit were not analyzed. There is no discussion that the elevation of the springs are estimated to be at elevations that are lower than the groundwater measured near the pit and thus are likely down gradient to the pit such that groundwater from the pit area will flow towards the springs.

3) "Respond to the testimony of the professional geologist who identified that the proposed mine expansion will create an increased landslide risk."

> My testimony was never referenced and the report is not responsive to the issue of increased groundwater flow towards the shoreline bluff.

No where in the report is the stability of the shoreline bluff assessed and no bluff observations were made. The potential for altering groundwater, and the stability of the shoreline bluff from that alteration, have not been addressed.

Stratum Group appreciates the opportunity to comment on the adequacy of the geology hazard assessment. Regrettably, the geology hazard assessment does not address the groundwater flow and slope stability of the nearby shoreline bluff as requested by Skagit County.

Sincerely yours,
Stratum Group

Dan McShane, L.E.G., M.Sc.
Licensed Engineering Geologist

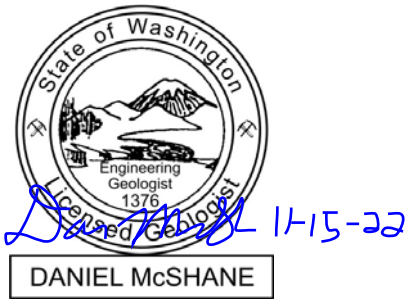


EXHIBIT E

STRATUM GROUP
PO Box 2546, Bellingham, Washington 98227

March 2, 2023

Re: **Response to:**
The Watershed Company Response to Evergreen Islands communication of 11/18/2022

As a licensed engineering geologist who has been part of the Lake Erie gravel pit review for three years, I am offering feedback on The Watershed Company's review of the original groundwater flow assessment that the Board of Commissioners deemed inadequate. Regrettably, The Watershed Company response letter listed as a 'Geologic-Hazard Site Assessment Third Party Review' on the County website does not support moving forward with project review. The Watershed Company did not identify or discuss the springs on the bluffs to the northwest of the proposed mine in the review of the reports. Furthermore, in the review of the groundwater elevations, The Watershed Company did not identify a very large discrepancy in the groundwater elevations between the groundwater reports prepared by Maul Foster Alongi (2016 and 2017) and Northwest Groundwater Consultants (2019). The review also failed to discuss that the Wood (2022) geology hazard site assessment was not responsive to the County's specific requests to "Analyze the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion." These notable omissions prevent the response from being relevant to the necessary review.

Springs northwest of mine

The Commissioners determined that the groundwater flow to the springs located to the northwest of the mine was essential for evaluating project impacts, but it has not been addressed. Maul Foster Alongi provided a Hydrogeologic Site Assessment Report (September 28, 2016). The purpose of that report was to meet the requirements of Skagit County Code 14.16.440(8)(b):

> *(b) A report by a qualified geologist, hydrogeologist or licensed engineer characterizing the area's ground water including, but not limited to, the following information:*
>
> *(i) A description of the geology and hydro-geology of the area including the delineation of aquifer, aquitards, or aquicludes (confining layers), hydrogeologic cross-sections, porosity and horizontal and vertical permeability estimates;*
>
> *(ii) Determination of the direction and velocity of ground water movement, water table contour and potentiometric surface maps (for confined aquifers), if applicable; and*
>
> *(iii) A map containing the limits of the mine, buffer zones, location of all ground water wells within 1 mile distance down gradient from the property boundaries,*

> ***location of all perennial streams and springs****, and definition or specification of locations of aquifer recharge and discharge areas.*

But the Maul Foster Alongi report (2016) did not identify the springs or streams located to the northwest of the property. Subsequent reports by Maul Foster Alongi (2017) and Northwest Groundwater Consultants (2019) also did not identify these springs.

In my comments on the project dated October 12, 2020, I pointed out that groundwater fed springs are located on the slopes to the northwest that were not identified in the Maul Foster Alongi (2016 and 2017) and Northwest Groundwater Consultants (2019) reports. Based on previous work I had done on these slopes, I noted that elevated groundwater levels were a factor in the landslides on these slopes.

Role of groundwater on the stability of the slopes to the northwest

The Wood Geology Hazard Site Assessment (2022) did not identify the springs and made no attempt to assess the groundwater flow to the springs even though this was a specific item requested by Skagit County Planning and Development Services. Wood appears to have been unaware of the groundwater springs. The Wood report used the same groundwater contour map as the Maul Foster Alongi (2017) report. The Wood assessment provided no assessment of the steep bluff areas to the northwest of the mine. The rationale for not assessing the slope was based on the assumption that groundwater does not flow to the bluff. The role of groundwater flow to the bluff remains unevaluated.

I submitted my original comments (October 12, 2020) because I have been on the slopes to the northwest and recognized that groundwater levels from a mid slope area of springs have been and are a major driver of slope instability along the slope area to the northwest of the mine (pictures attached). Groundwater impacts to the stability of the slope to the northwest of the mine is why the headwall of the landslide scarp along the bluff northwest of the mine has recessed approximately 300 feet into the upland area (attached lidar image). The potential change to groundwater flow towards these springs by the removal of the glacial till cover within the proposed mine expansion has still not been evaluated. These springs were not identified in the groundwater assessment, the geology hazard site assessment or the response document.

If recharge to groundwater that feeds these springs is increased, the frequency and magnitude of groundwater driven landslides will increase on these slopes.

Discrepancy in water elevations

While the letter by The Watershed Company stated that they found “no significant discrepancies or inaccuracies in the data”, the letter did not discuss the very large groundwater elevation discrepancy reported between the Maul Foster Alongi (2016 and 2017) reports and the water directly measured at two wells by Northwest Groundwater Consultants (2019). The water levels

measured directly by Northwest Groundwater Consultants were 50 feet and 35 feet lower than the groundwater contour map produced in 2016 and 2017. This large discrepancy strongly suggests that the groundwater elevations of the all of the other wells that were not directly measured are inaccurate and therefore the groundwater contour map is not an accurate portrayal of the groundwater elevations.

The significant difference in groundwater elevations between the 2016/2017 report and the measured elevations in the 2019 report, as well as the lack of recognition of the groundwater discharge locations on the slopes to the northwest, should have been noted in The Watershed Company review, particularly given that the County may be considering the review as a third party review.

Groundwater flow and potential changes of groundwater flow towards the bluffs has not been evaluated

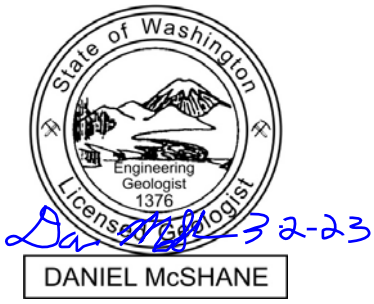
There are no data regarding the groundwater elevations between the proposed mine expansion and the bluffs to the northwest of the mine.

The areas of springs on the slopes to the northwest of the mine have still not been analyzed despite the specific request by Skagit County Planning and Development Services. The proposed scope of work prepared by Canyon Environmental Group and submitted to the County as part of the application process by the applicant has not been completed.

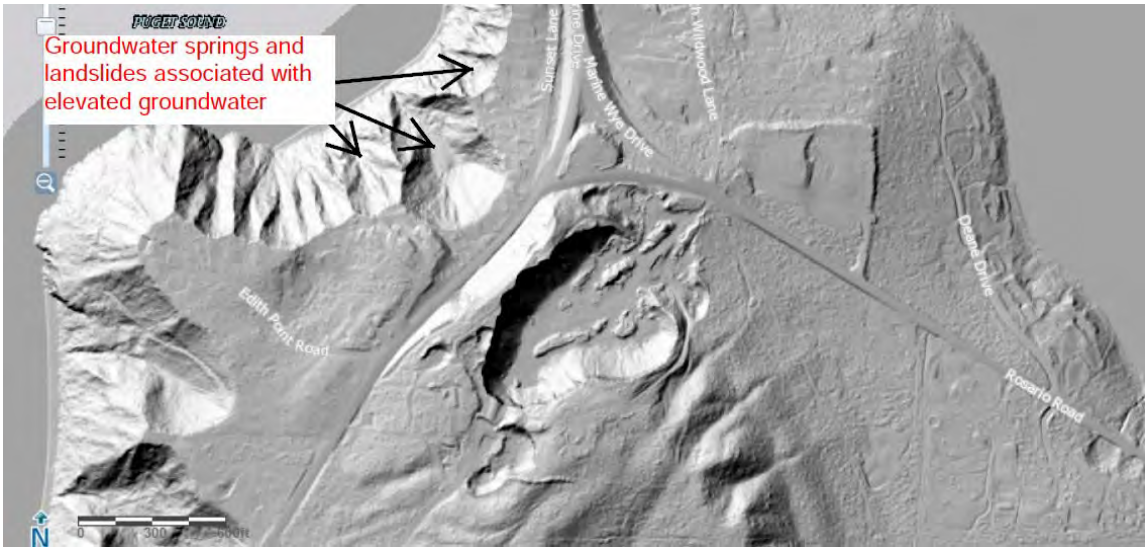
I remained very concerned about the potential impacts to groundwater levels and the stability of the bluffs to the northwest of the mine in the absence of an assessment of the mine's impacts on those areas.

Sincerely yours,
Stratum Group

Dan McShane, L.E.G., M.Sc.
Licensed Engineering Geologist



Site of recent sand blowout from perched groundwater just above the silt clay layer at bluff northwest of the mine.



Lidar image of groundwater induced slide areas and mine area

EXHIBIT F

LORING ADVISING

By Email

November 18, 2022

Kevin Cricchio, Senior Planer
Skagit County Planning and Development Services
1800 Continental Place
Mount Vernon, WA 98273
kcricchio@co.skagit.wa.us

Re: File No. PL16-0056 -- Lake Erie Pit LLC Gravel Mine Expansion Special Use Permit

Dear Mr. Cricchio,

I'm writing on behalf of Evergreen Islands ("Evergreen") to address the inapposite Geologic Hazard Site Assessment ("Assessment") that Wood Environment & Infrastructure Solutions, Inc. submitted on behalf of the Lake Erie Pit 1 Expansion in August 2022. As explained in the attached letter from Dan McShane, a licensed engineering geologist, the Assessment did not provide the analyses requested by Skagit County Planning and Development Services ("PDS") in its March 21, 2021 letter to Lake Erie LLC. It is frustrating that a year after the Hearing Examiner granted an extension on the permit application, these analyses have not yet been conducted. But given the lack of new, applicable information, Evergreen requests that PDS set aside the Assessment and reiterate its requests to Lake Erie.

As you will see in the comments from Mr. McShane, he determined that the Assessment did not address the central question posed to Lake Erie after the Board of Commissioners remanded the application decision – would it impact groundwater that decreased bluff stability for the residential neighborhoods to the west and northwest of the mine site? Mr. McShane's review found that "[t]he potential groundwater flow direction was not analyzed in the report" and that "[t]he springs on the shoreline bluffs to the west and northwest of the pit were not analyzed." He concludes that, "[r]egrettably, the geology hazard assessment does not address the groundwater flow and slope stability of the nearby shoreline bluff as requested by Skagit County."

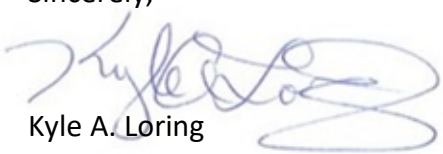
It is possible that Lake Erie would have been able to supply PDS with the requested analysis if it had continued to engage Canyon Environmental Group ("Canyon") for the work they proposed in September 2021. At that time, Lake Erie supplied the Hearing Examiner with a Proposed Hydrogeology and Groundwater Characterization Timeline from Canyon that expressly stated that the scope of the services was to "help characterize the groundwater and groundwater flow directions related to existing conditions and the proposed mine expansion."

That proposal was signed by a hydrogeologist/wetland ecologist/environmental geologist. Yet the Assessment was authored by a different consultant--geotechnical engineers who conducted a more generic geologic hazard site assessment that did not acknowledge the documented shortcomings of the prior reports, and instead relied on them for the same unsupported assertion that groundwater at the site does not flow toward the nearby marine bluffs.

Because the Assessment does not offer information responsive to PDS' requests, it thus does not provide information necessary to determine the mine's risks on the residential neighborhood to the west and northwest of the proposed mine. Consequently, Evergreen is forced to request that PDS reiterate its request to Lake Erie to investigate groundwater flow at the site and its potential impact on the bluffs' slope stability.

If you have any questions, please do not hesitate to contact me at 360-622-8060 or kyle@loringadvising.com.

Sincerely,



Kyle A. Loring

Cc: Marlene Finley

Attachment: Stratum Group Comments Regarding Geologic Hazard Site Assessment

STRATUM GROUP
PO Box 2546, Bellingham, Washington 98227

November 15, 2022

Re: **Proposed Lake Erie Pit Expansion**
Comments Regarding Geologic Hazard Site Assessment

I reviewed the Wood Geologic Hazard Site Assessment for the proposed Lake Erie Pit expansion (dated August 11, 2022). The assessment does not address any of the areas outlined in the Skagit County Planning and Development Services (PDS) letter to Lake Erie LLC (dated March 21, 2021).

PDS requested that the assessment include three specific items:

1) "Analyze the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion and attendant removal of soil and vegetation which could alter groundwater behavior in the vicinity of the mine."

> The potential groundwater flow direction was not analyzed in the report. The report only references the previous reports that also did not analyze the groundwater flow direction towards the shoreline bluff.

2) "Analyze the presence of springs on the coastal bluff to the northwest of the mine that are at an elevation down gradient of the inferred groundwater level."

> The springs on the shoreline bluffs to the west and northwest of the pit were not analyzed. There is no discussion that the elevation of the springs are estimated to be at elevations that are lower than the groundwater measured near the pit and thus are likely down gradient to the pit such that groundwater from the pit area will flow towards the springs.

3) "Respond to the testimony of the professional geologist who identified that the proposed mine expansion will create an increased landslide risk."

> My testimony was never referenced and the report is not responsive to the issue of increased groundwater flow towards the shoreline bluff.

No where in the report is the stability of the shoreline bluff assessed and no bluff observations were made. The potential for altering groundwater, and the stability of the shoreline bluff from that alteration, have not been addressed.

Stratum Group appreciates the opportunity to comment on the adequacy of the geology hazard assessment. Regrettably, the geology hazard assessment does not address the groundwater flow and slope stability of the nearby shoreline bluff as requested by Skagit County.

Sincerely yours,
Stratum Group

Dan McShane, L.E.G., M.Sc.
Licensed Engineering Geologist

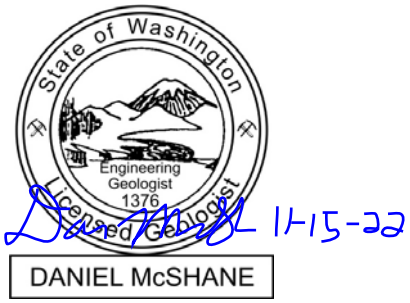


EXHIBIT G

LORING ADVISING

By Email

March 3, 2023

Kevin Cricchio, Senior Planer
Skagit County Planning and Development Services
1800 Continental Place
Mount Vernon, WA 98273
kcricchio@co.skagit.wa.us

Re: File No. PL16-0056 – The Watershed Company Response to Evergreen Islands communication of 11/18/2022 re: Lake Erie Pit

Dear Mr. Cricchio,

I'm submitting this letter and attached analysis from Dan McShane on behalf of Evergreen Islands ("Evergreen") to respond to a memorandum that you received from The Watershed Company ("Response") in response to Evergreen's November 2022 missive. Before addressing the Response, I should mention that Evergreen was disappointed to have to learn about it through the Skagit County Planning & Development Services ("PDS") website. As the party that successfully appealed the inadequate original groundwater reports for the site, Evergreen has a reasonable expectation that it would be informed when the applicant and the County prepare or receive new reports regarding the site's groundwater characteristics. This is particularly true of documents expressly titled "Response to Evergreen Island [sic] communication." We ask that PDS ensure that it communicates such materials to Evergreen in the future.

With regard to the substance of the Response, we have attached a letter from Dan McShane, a licensed engineering geologist and the expert who diagnosed the flaws in the initial groundwater review for the proposed Lake Erie gravel pit, that explains that the Response also ignores the potential for the mine to increase the risk of landslides for the neighborhood to the northwest. Mr. McShane concludes that "I remain very concerned about the potential impacts to groundwater levels and the stability of the bluffs to the northwest of the mine in the absence of an assessment of the mine's impacts on those areas."

Mr. McShane reached this conclusion after identifying the following flaws in the Response and earlier groundwater reviews:

- The Response does not identify or discuss the springs on the bluffs to the northwest of the proposed mine in its review of the earlier reports. These springs, which have never

been evaluated notwithstanding that they lie downgradient of the mine, were the primary reason that the Skagit Board of Commissioners reversed Hearing Examiner approval of the mine. Mr. McShane notes that if recharge to groundwater that feeds these springs is increased, the frequency and magnitude of groundwater-driven landslides will increase. Nonetheless, the Response makes no reference to them, instead discussing unstable slopes to the west and southwest of the proposed mine.

- There are significant discrepancies in the groundwater elevations identified by different applicant reports. While the Response asserts that no significant discrepancies or inaccuracies were found in the data, the water levels measured directly by Northwest Groundwater Consultants were 50 feet and 35 feet lower than those identified on the groundwater contour map produced by Maul Foster Alongi in 2016 and 2017. This large discrepancy casts doubt on the accuracy of the elevations the application presumed for the other wells that were not directly measured.

- The groundwater flow and potential changes to the groundwater flow toward the unstable bluffs has not been evaluated. Ultimately, there are no data regarding groundwater elevations between the proposed mine and the unstable bluffs to the northwest of the mine. The County requested this information nearly two years ago in its March 23, 2021 letter to Bill Wooding, which required an assessment of the following specific site elements:

    - Analysis of the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion and attendant removal of soil and vegetation which could alter groundwater behavior in the vicinity of the mine.

    - Analysis of the presence of springs on the coastal bluff to the northwest of the mine that are at an elevation down gradient of the inferred groundwater level.

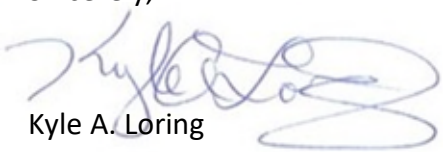
    - Respond to the testimony of the professional geologist [Dan McShane] who identified that the proposed mine expansion will create an increased landslide risk.

The Canyon Environmental Group ("Canyon") proposal that the applicant had obtained to answer these questions could have done so. The applicant inexplicably chose a different consultant who did not carry out the scope Canyon had proposed, and who declined to conduct the analyses that PDS had requested. The Response likewise omits any analysis of groundwater impacts on the bluffs to the northwest.

Absent this requested information, which is essential for answering whether the mine will increase the likelihood that residents to the northwest will suffer from increased landslides, the project cannot move forward. Evergreen therefore requests that PDS reiterate its request to Lake Erie to investigate groundwater flow between the site and the downgradient springs in the bluffs to the northwest, and, if studies conclude that the mine will increase the groundwater flow to those bluffs, whether the increased flow will increase the instability of those bluffs.

If you have any questions, please do not hesitate to contact me at 360-622-8060 or kyle@loringadvising.com.

Sincerely,



Kyle A. Loring

Cc: Marlene Finley, Evergreen Islands

Attachment: Stratum Group Response to The Watershed Company Response

STRATUM GROUP
PO Box 2546, Bellingham, Washington 98227

March 2, 2023

Re: **Response to:**
The Watershed Company Response to Evergreen Islands communication of 11/18/2022

As a licensed engineering geologist who has been part of the Lake Erie gravel pit review for three years, I am offering feedback on The Watershed Company's review of the original groundwater flow assessment that the Board of Commissioners deemed inadequate. Regrettably, The Watershed Company response letter listed as a 'Geologic-Hazard Site Assessment Third Party Review' on the County website does not support moving forward with project review. The Watershed Company did not identify or discuss the springs on the bluffs to the northwest of the proposed mine in the review of the reports. Furthermore, in the review of the groundwater elevations, The Watershed Company did not identify a very large discrepancy in the groundwater elevations between the groundwater reports prepared by Maul Foster Alongi (2016 and 2017) and Northwest Groundwater Consultants (2019). The review also failed to discuss that the Wood (2022) geology hazard site assessment was not responsive to the County's specific requests to "Analyze the landslide risk arising from the potential for increased groundwater migration to the west/northwest of the mine due to the proposed expansion." These notable omissions prevent the response from being relevant to the necessary review.

Springs northwest of mine

The Commissioners determined that the groundwater flow to the springs located to the northwest of the mine was essential for evaluating project impacts, but it has not been addressed. Maul Foster Alongi provided a Hydrogeologic Site Assessment Report (September 28, 2016). The purpose of that report was to meet the requirements of Skagit County Code 14.16.440(8)(b):

> *(b) A report by a qualified geologist, hydrogeologist or licensed engineer characterizing the area's ground water including, but not limited to, the following information:*
>
> *(i) A description of the geology and hydro-geology of the area including the delineation of aquifer, aquitards, or aquicludes (confining layers), hydrogeologic cross-sections, porosity and horizontal and vertical permeability estimates;*
>
> *(ii) Determination of the direction and velocity of ground water movement, water table contour and potentiometric surface maps (for confined aquifers), if applicable; and*
>
> *(iii) A map containing the limits of the mine, buffer zones, location of all ground water wells within 1 mile distance down gradient from the property boundaries,*

> ***location of all perennial streams and springs****, and definition or specification of locations of aquifer recharge and discharge areas.*

But the Maul Foster Alongi report (2016) did not identify the springs or streams located to the northwest of the property. Subsequent reports by Maul Foster Alongi (2017) and Northwest Groundwater Consultants (2019) also did not identify these springs.

In my comments on the project dated October 12, 2020, I pointed out that groundwater fed springs are located on the slopes to the northwest that were not identified in the Maul Foster Alongi (2016 and 2017) and Northwest Groundwater Consultants (2019) reports. Based on previous work I had done on these slopes, I noted that elevated groundwater levels were a factor in the landslides on these slopes.

Role of groundwater on the stability of the slopes to the northwest

The Wood Geology Hazard Site Assessment (2022) did not identify the springs and made no attempt to assess the groundwater flow to the springs even though this was a specific item requested by Skagit County Planning and Development Services. Wood appears to have been unaware of the groundwater springs. The Wood report used the same groundwater contour map as the Maul Foster Alongi (2017) report. The Wood assessment provided no assessment of the steep bluff areas to the northwest of the mine. The rationale for not assessing the slope was based on the assumption that groundwater does not flow to the bluff. The role of groundwater flow to the bluff remains unevaluated.

I submitted my original comments (October 12, 2020) because I have been on the slopes to the northwest and recognized that groundwater levels from a mid slope area of springs have been and are a major driver of slope instability along the slope area to the northwest of the mine (pictures attached). Groundwater impacts to the stability of the slope to the northwest of the mine is why the headwall of the landslide scarp along the bluff northwest of the mine has recessed approximately 300 feet into the upland area (attached lidar image). The potential change to groundwater flow towards these springs by the removal of the glacial till cover within the proposed mine expansion has still not been evaluated. These springs were not identified in the groundwater assessment, the geology hazard site assessment or the response document.

If recharge to groundwater that feeds these springs is increased, the frequency and magnitude of groundwater driven landslides will increase on these slopes.

Discrepancy in water elevations

While the letter by The Watershed Company stated that they found “no significant discrepancies or inaccuracies in the data”, the letter did not discuss the very large groundwater elevation discrepancy reported between the Maul Foster Alongi (2016 and 2017) reports and the water directly measured at two wells by Northwest Groundwater Consultants (2019). The water levels

measured directly by Northwest Groundwater Consultants were 50 feet and 35 feet lower than the groundwater contour map produced in 2016 and 2017. This large discrepancy strongly suggests that the groundwater elevations of the all of the other wells that were not directly measured are inaccurate and therefore the groundwater contour map is not an accurate portrayal of the groundwater elevations.

The significant difference in groundwater elevations between the 2016/2017 report and the measured elevations in the 2019 report, as well as the lack of recognition of the groundwater discharge locations on the slopes to the northwest, should have been noted in The Watershed Company review, particularly given that the County may be considering the review as a third party review.

Groundwater flow and potential changes of groundwater flow towards the bluffs has not been evaluated

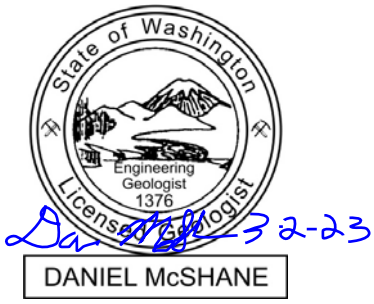
There are no data regarding the groundwater elevations between the proposed mine expansion and the bluffs to the northwest of the mine.

The areas of springs on the slopes to the northwest of the mine have still not been analyzed despite the specific request by Skagit County Planning and Development Services. The proposed scope of work prepared by Canyon Environmental Group and submitted to the County as part of the application process by the applicant has not been completed.

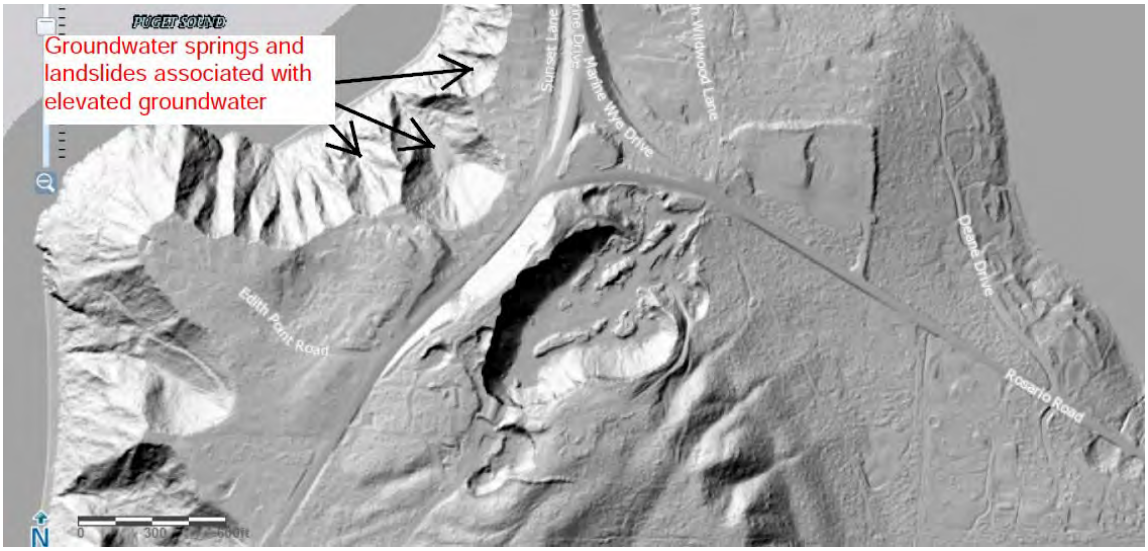
I remained very concerned about the potential impacts to groundwater levels and the stability of the bluffs to the northwest of the mine in the absence of an assessment of the mine's impacts on those areas.

Sincerely yours,
Stratum Group

Dan McShane, L.E.G., M.Sc.
Licensed Engineering Geologist



Site of recent sand blowout from perched groundwater just above the silt clay layer at bluff northwest of the mine.



Lidar image of groundwater induced slide areas and mine area

NOTICE OF PUBLIC HEARING:

Hearings are now being held hybrid, meaning in-person and virtual (via Zoom). To participate in the public hearing virtually you can call +1(253)215-8782, US (Tacoma), or +1(719)359-4580 US, **Meeting ID: 812 7077 5954# US (Passcode: 728120)**, or to join via video please visit: https://us06web.zoom.us/j/81270775954?pwd=YzdwSmxLeXp6cDdCbmFXK0ZSVWNRdz09

Log in information is also available on the Hearing Examiner website located at www.skagitcounty.net under the "*Department Directory,*" "Hearing Examiner."

If you are having issues connecting to the hearing, please call the numbers listed below.

Notice is hereby given that the Skagit County Hearing Examiner will hold a public hearing on **Wednesday June 28, 2023**, **in the Board of County Commissioners Hearing Room, 1800 Continental Place, Mount Vernon, Washington, at 1:00 PM or soon thereafter**, for the purpose of determining the following:

a. **Current Use Open Space #1-2023:** Paul Blake. Located N of Rawlins Road and S of Skagit River. Portion of P15556 containing 17.00 acres. Legal Description is Portion of S1/2 Section 9, Township 33 North, Range 3 East, W.M. **Staff Contact**; Kiffin Saben

b. **Hearing to review the remanded items required by the Hearing Examiner on March 9, 2021 for Special Use Permit Application PL16-0556 submitted by** Lake Erie Pit 1, LLC requesting the expansion of an existing gravel/sand mining operation from 17.78 acres to approximately 53.5 acres. Per the direction of the Hearing Examiner, the applicant was required to prepare a Geologically Hazardous Area Site Assessment associated with the steep coastal area located to the west/northwest of the mine and prepare a Geologically Hazardous Mitigation Area Plan. The requested items were submitted on August 12, 2022 and determined complete on January 18, 2023 following a third-party review by The Watershed Company. The subject site is located within the Rural Resource-Natural Resource Lands (RRc-NRL) Zoning/Comprehensive Plan Designated Area and designated within the Mineral Resource Overlay. The proposed mining expansion is located south of the intersection of Rosario Road and Marine Drive, Fidalgo Island, within a portion of Section 11, Township 34 North, Range 01 East, Willamette Meridian situated within unincorporated Skagit County, Washington. Subject Parcels: Existing Mine: P19108, P19162, & P19165; Expansion to Mine: P19158, P90028, P19164, P19165, P19155, P19161; Contiguous Parcels (Same Ownership): P19168, & P19163. **Staff Contact**: Kevin Cricchio, Senior Planner

c. **Special Use Permit application #PL22-0603 submitted by** Skagit County Public Works, c/o Devin Willard, for the Young's Park Access and Material Stockpiling Project. The project proposal includes three (3) primary components: First, the project intends to recognize the site as a "Public use" and clearly define a public overflow parking area with the capacity for approximately 7 vehicles to allow for improved access to the Skagit County owned (Parks) property for recreational use by the public. Second, the site will be used by the public as a trailhead access (primary and secondary Trailhead) to the public property along the Padilla Bay shoreline. And third, the proposal involves setting aside a portion of the graded parking lot area to allow for the stockpiling of material intended to be used for road improvement and maintenance projects, such as re-surfacing/chip sealing, to prevent excessive ferry trips and to

reduce traffic disruptions during the scheduled project activities. Located within the Rural Reserve (RRv) zoning/comprehensive plan designated area at 4243 Guemes Island Rd, Anacortes, within a portion of Section 26, Township 36N, Range 1E W.M., situated within Skagit County, Washington. (P46558). **Staff Contact:** Brandon Black, Current Planning Manager.

Your views for or against the requests are invited either by attendance, representation, or letter. Comments and/or facsimiles must be received by Planning and Development Services no later than 4:30 P.M. June 27, 2023, or be presented at the public hearing. Email comments may be submitted with the PDS website under the current legal notices tab or to the Office of the Hearing Examiner.

If you would like to speak at the hearing, please contact either Maria Reyna at (360) 416-1150, email mariar@co.skagit.wa.us; Keith Luna at (360) 416-1152, email kluna@co.skagit.wa.us; or Russell Walker at (360) 416-1154, email russow@co.skagit.wa.us to sign up.

TO BE PUBLISHED ONE TIME ONLY IN THE June 8, 2023, Edition.
Transmitted to Skagit Valley Herald June 6, 2023

HEAgenda.ks.kc.bb.06.09.23