

**Eagle Harbor Sand & Gravel, Inc.**

**Eagle Harbor Mine**

**(MLF #80171)**

**Town of Barre, Orleans County, New York**



**Site Monitoring, Complaint Response and  
Mitigation Plan**

July 18, 2023

Prepared for: New York State Department of  
Environmental Conservation

Submitted by: Mr. Thomas Biamonte  
Eagle Harbor Sand & Gravel, Inc.

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**MAP POCKET**

Site Plan Map

**ATTACHMENT**

Well Survey Letter and Form Template

## **1.0 SITE MONITORING**

### **1.1 LOCAL GEOLOGY**

There are two water yielding aquifers at the Eagle Harbor site: an upper unconsolidated sand and gravel aquifer and a lower dolostone bedrock aquifer.

The water table aquifer, or surficial aquifer, occurs within the unconsolidated sand and gravel deposits at the site. The surficial aquifer is recharged via direct precipitation on the sand and gravel. The depth to water in the surficial aquifer ranges from several feet to over 30 ft at the site and shows seasonal fluctuations of several feet.

The bedrock aquifer occurs below the surficial aquifer and within the dolostones of the Goat Island and Gasport Members of the Lockport Dolostone Formation and the Decew Dolostone. The primary water-bearing fractures occur in these dolostones, with infrequent natural fractures below in the uppermost Rochester Shale; consequently, the Rochester Shale can be considered the base of the bedrock aquifer at the site. The bedrock aquifer receives most of its recharge from the overlying sand and gravel aquifer where it is in contact with the bedrock; discontinuous or patchy silty/clayey layers occur in some areas and can limit, or retard, recharge and result in a confined, or semi-confined aquifer bedrock aquifer.

### **1.2 MONITORING LOCATIONS**

Existing on-site monitoring locations consist of a series of monitoring wells completed in the surficial and bedrock aquifers and staff gauges for surface water monitoring. Existing off-site monitoring locations consist of residential wells completed in the surficial and bedrock aquifers. The monitoring locations are shown on the Site Plan Map included in the map pocket in the Appendix and the monitoring locations are summarized in Table 1.

### **1.3 MONITORING METHODOLOGY**

The water levels in the existing on-site and off-site monitoring wells will be collected on a quarterly basis using an electronic or sonic water level meter.

### **1.4 MONITORING SCHEDULE**

Water level monitoring data will be submitted to the NYSDEC Region 8 Permit Administrator on an annual basis by January 15 of the following year. Data will be provided in tabular format. A discussion of long-term trends in the water-level data and quarry pumping data, and/or anomalies, will be discussed with the annual reporting of the water level monitoring data.

## 1.5 WELL INVENTORY

Well surveys will be offered to all private well owners within ½ mile of the quarry excavation area that have not already participated in the previous well surveys. The purpose of the well survey is to establish a baseline against which to evaluate possible future complaints. EHS&G will offer to conduct the surveys at no cost to the private well owners and notify them via certified mail delivery. Proof of offer to survey and all copies of all responses received will be provided to the Department within 30 days of the response deadline. A copy of the template letter to be sent to the private well owners is included as Attachment A.

The survey will include an interview with the owner concerning well construction and water quality, sampling of routine drinking water parameters consistent with the previous well surveys EHS&G has conducted, and measuring depth to water, whenever possible.

The additional well surveys will be completed prior to the commencement of quarry dewatering activities.

## **2.0 COMPLAINT RESPONSE AND MITIGATION**

### **2.1 ACTION DISTANCE**

EHS&G will investigate any groundwater user complaints received within ½ mile of the quarry excavation area. This action distance is shown on the Site Plan Map included in the Map Pocket.

### **2.2 GROUNDWATER USER INVENTORY**

Municipal water is now available for all residences within ½ mile of the quarry excavation area but not all residences have opted to switch over from well water to municipal water. The well inventory described in Section 1.5 includes a question on whether the resident is utilizing well water or municipal water.

### **2.3 COMPLAINT PROCEDURE**

The procedure for receiving, tracking, and investigating any complaints of changes in well head, water quality, performance, or other issues in all wells within ½ mile of the quarry excavation area is provided below.

The permittee shall maintain a chronological log of all complaints received. The log shall contain the name of the person(s) who registered the complaint, the date and time of the complaint, the nature of the complaint, and the date and type of action that was taken to resolve the complaint. These actions taken to resolve the complaint are discussed in the following section. This chronological log shall be submitted to NYSDEC within 15 days of a written request by NYSDEC.

### **2.4 COMPLAINT RESPONSE AND RESOLUTION**

The permittee will respond and resolve all substantiated complaints of offsite well impacts, provided that the complainant is within a ½ mile of the quarry excavation and has participated in the residential well survey. The actions that will be taken to address residential well complaints will follow these three steps:

1. In the event that an off-site property owner makes a claim of a loss of quality or quantity of water supply due to a blasting event or mining activities, the permittee shall investigate and determine whether or not the loss is well system related (pump, pressure tank, plumbing, etc.). The initial investigation will be conducted within five (5) business days of the claim.

2. If it is determined that the loss of quality or quantity is not well system related, or more than five (5) business days have passed without an initial investigation being conducted, the permittee shall:
  - a. Immediately provide the property owner with a temporary potable residential water supply that meets NYSDOH quality and quantity standards for residential drinking water. This temporary potable water supply shall continue for as long as NYSDEC determines it is necessary or a permanent replacement potable supply is established pursuant to paragraph 2c. or 3 below.
  - b. Notify the NYSDEC Regional Permit Administrator;
  - c. Investigate the loss claim with the cooperation of the property owner and provide NYSDEC with a written report within 30 days of the property owner claim. The permittee reserves the right to deepen the existing well, drill a replacement well for the property owner, or hookup the residence to public water supply, all at the permittee's expense, rather than supplying the property owner with a temporary potable water supply.
3. If NYSDEC determines that blasting or mining is likely to be a contributing cause of the alleged loss of quality or quantity of water supply, then under the direction of NYSDEC staff (including the setting of deadlines) the permittee shall take immediate steps to correct the problem and to restore a potable residential water supply meeting NYSDOH quality and quantity standards for residential drinking water supply. Subject to approval by NYSDEC, the means of water supply restoration will be at the permittee's expense and can include, but is not limited to, repairing the water supply well, deepening the well, drilling a new well, hooking up the residence to the public water supply, or providing an alternate water supply.
4. If NYSDEC determines that blasting or mining is not a contributing cause of the alleged loss of quality or quantity of water supply, NYSDEC will provide written notification of its findings to both the permittee and the well owner and there shall be no further obligation by the permittee. All substantiated complaints and a summary of the response actions taken will be reported to the NYSDEC in the annual report.

## **2.5 MITIGATION OPTIONS**

The mitigation options for a substantiated complaint of residential water-supply well impacts are discussed in Section 2.4, Complaint Response and Resolution. In lieu of reducing or ceasing the permitted water withdrawal (quarry pumping) as a mitigation option, the applicant will cover the municipal water bill for five years, in addition to covering the cost of hookup to the municipal water supply, if necessary to resolve a substantiated well impact.

If wetland drawdown impacts due to quarry dewatering are substantiated, EHS&G has the ability, if directed by the NYSDEC, to divert clean water from the onsite ponds to wetland KN-9 to maintain the integrity of the wetland or, in the case of downstream flooding, cease off-site discharge until the flood stage returns to normal.

If, through the complaint response and resolution process, these mitigation measures are determined to be inadequate, EHS&G will, as a final mitigation option, reduce or cease the permitted water withdrawal (quarry pumping).

## **2.6 WATER CONSERVATION ACTIONS**

If directed by the NYSDEC, EHS&G has the ability to divert clean water from the onsite ponds to wetland KN-9 to maintain the integrity of the wetland or, in the case of downstream flooding, cease off-site discharge until the flood stage returns to normal. Additionally, the quarry dewatering pumps will be metered.

## Tables



**TABLE 1. Summary of Well Construction Data**

	Well ID	Measuring Point for (MP) Water Levels	MP Elevation (ft amsl)	Well Stickup (ft)	Overburden thickness (ft)	Elevation of Top of Bedrock (ft amsl)	Depth to Top of Rochester Shale Below Grade (ft)	Screened Interval (ft)	Total Depth Below Grade (ft)
Bedrock Aquifer	MW-1	TOC <sup>1</sup>	679.33	0.85	35.9	642.58	94.2	open corehole	115.9
	MW-2	TOC	687.44 <sup>2</sup>	10.83	26.8	649.81	86.3	open corehole	108
	MW-3	TOC	670.25	2.46	34.5	633.29	70	open corehole	80.5
	MW-4	TOC	709.67	2.23	59.7	647.74	124.6	open corehole	128.4
	PW-1	TOC	676.2	1.6	28	646.6	unknown	bedrock 28-95	95
	PW-1A	TOC	677 <sup>5</sup>	1.8	28	647.2	unknown	bedrock 38-86	86
	Parsons	TOC	668	1.5	unknown	unknown	unknown	bedrock	unknown
	Miller Bam	TOC	699.01	1	unknown	637.5(est.)	unknown	open borehole	70
		Top of Concrete	714.42	0	unknown	657.8 (est)	unknown	open borehole	66.1
Surficial Aquifer	MW-1S	TOC	679.41	1.02	>11.94	<667.47	Not Encountered	9.44-11.94	11.94
	MW-2S	TOC	681.57	3.21	>12	<666.36	Not Encountered	~9.5-12	12
	MW-3S	TOC	670.29	2.44	>18	<649.85	Not Encountered	8-18	18
	MW-4S	TOC	709.98	2.46	>40.3	<667.22	Not Encountered	28.5-38.5	40.3
	MW-5S	TOC	677.9	2.96	>25	<649.94	Not Encountered	5-25	25
	USGS OI-20	Grade	695	NM	>54.2	<640.8	Not Encountered	39.1-48.9	54.2
Surface Water	SG-1	top of post	668	NA <sup>4</sup>	NA	NA	NA	NA	NA
	SG-2	top of post	665.71	NA	NA	NA	NA	NA	NA
	SG-3	top of gauge	668.77	NA	NA	NA	NA	NA	NA
	P-G-1	top of stake	672.2	NA	NA	NA	NA	NA	NA
	WP-1	top of pipe	672.5	NA	NA	NA	NA	NA	NA
	Kam's Rd	top of culvert	not measured	NA	NA	NA	NA	NA	NA
	Maple St	top of culvert (Lower Lip)	661.34	NA	NA	NA	NA	NA	NA

Notes:

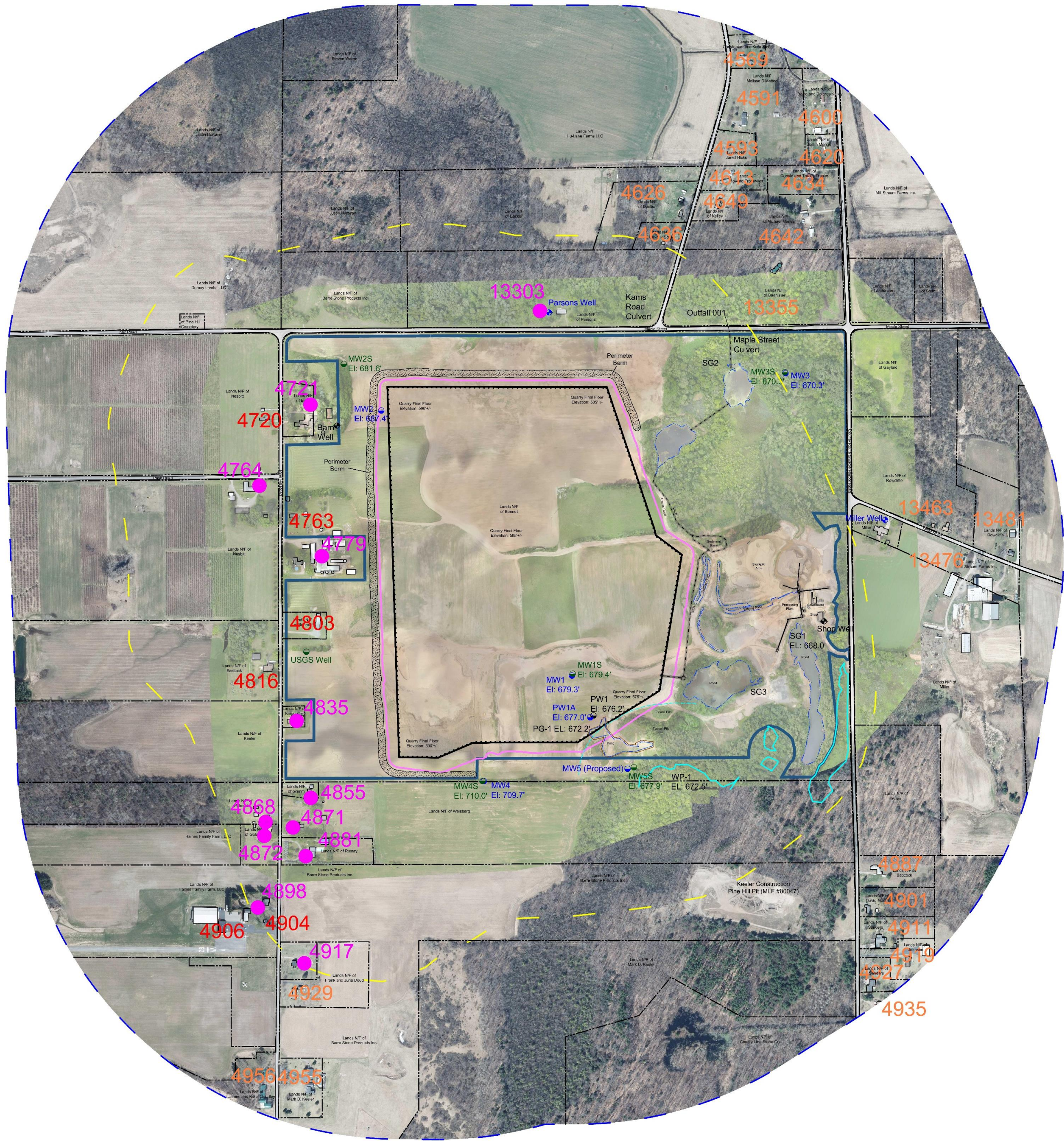
1. TOC = Top of Casing
2. Top of Casing elevation is currently 10.83 ft higher than grade at time of well installation; a 10.83-ft casing extension was added to top of well so that it would not be buried by reclamation fill; grade elevation at time of MW-2 installation was approximately 676.61 ft
3. Top of Bam well casing is in a vault below ground; measurements are made from the top of the concrete slab vault cover, just above grade.
4. NA = Not applicable; surface water monitoring location
5. Measuring point for water levels during February 2020 pumping test was top of stilling tube at elevation 677.8

**TABLE 2. Additional Well Survey Locations Within 1/2 Mile of Proposed Quarry**

<u>Tax ID</u>	<u>Name</u>	<u>Physical Address</u>	<u>Mailing Address</u>
104.-1-30.22	Frank and June Doud	4929 Pine Hill Rd, Albion, NY 14411	Same as physical address
104.-1-34.2	Mark D. Keeler	4955 Pine Hill Rd, Albion, NY 14411	Same as physical address
104.-1-33.1	James and Karol Quartley	4956 Pine Hill Rd, Albion, NY 14411	Same as physical address
93.-1-46	Christopher and Kara Smith	4569 Kams Road, Albion, NY 14411	Same as physical address
93.-1-47.211	Meliss DeMatteo	4591 Kams Road, Albion, NY 14411	Same as physical address
93.-1-47.23	Jared Hicks	4593 Kams Road, Albion, NY 14411	710 Ladue Road, Brockport, NY 14420
93.-1-48.221	Howard Fromwiller	4613 Kams Road, Albion, NY 14411	Same as physical address
93.-1-48.222	Michael and Margaret Kelley	4649 Kams Road, Albion, NY 14411	Same as physical address
93.-1-52.1	Thomas Decker and Julie Myers	4626 Kams Road, Albion, NY 14411	Same as physical address
93.-1-49	Richard Bannister	13355 Maple Street, Albion, NY 14411	Same as physical address
93.-1-48.1	Michael Manes	4642 Eagle Harbor Rd, Albion, NY 14411	Same as physical address
93.-1-48.21	Donald and Tracey Frasier	4634 Eagle Harbor Rd, Albion, NY 14411	Same as physical address
93.-1-47.112	Justin Mengs	4620 Eagle Harbor Rd, Albion, NY 14411	Same as physical address
93.-1-47.121	David and Dolores Kelley	4600 Eagle Harbor Rd, Albion, NY 14411	Same as physical address
105.-1-58.11	Mill Stream Farms, Inc.	13476 Miller Rd, Albion, NY 14411	13446 Miller Rd, Albion, NY 14411
105.-1-2	Randy and Laurie Rowcliffe	13463 Miller Rd, Albion, NY 14411	13481 Miller Rd, Albion, NY 14411
105.-1-3.1	Randy and Laurie Rowcliffe	13481 Miller Rd, Albion, NY 14411	Same as physical address
105.-1-56	Jesse, Cheryl, Lawrence and Kevin Babcock	4887 Eagle Harbor Rd, Albion, NY 14411	Same as physical address
105.-1-55	David Martin	4901 Eagle Harbor Rd, Albion, NY 14411	3056 Westover Dr, State College, PA 16801
105.-1-54.1	Marty and Beverly Sanders	4911 Eagle Harbor Rd, Albion, NY 14411	Same as physical address
105.-1-53.121	Paul and Shelly Johnson	4919 Eagle Harbor Rd, Albion, NY 14411	Same as physical address
105.-1-53.11	Michael and Wendy Sanders	4927 Eagle Harbor Rd, Albion, NY 14411	Same as physical address
105.-1-53.2	Merlin Moyer and Kristen Yaw	4935 Eagle Harbor Rd, Albion, NY 14411	Same as physical address

**Map Pocket**





**SITE PLAN MAP WITH  
FUTURE MONITORING & WELL SURVEY LOCATIONS**

**Eagle Harbor Mine**  
Eagle Harbor Sand & Gravel, Inc.  
Town of Barre, Orleans County, New York

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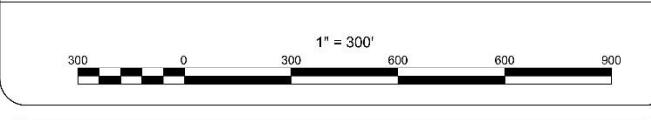
**REVISIONS**

Date	Description	By
1/11/18	Update Bedrock Excavation Area	BTM
6/5/18	Topographic Update	BTM
12/13/18	Update for Permit Modification	BTM
2/6/19	Update for NOIA	BTM
8/22/19	Update for NOIA	BTM
3/6/20	Add pond and monitoring points	BTM
4/17/23	Revise Proposed Berm	BTM
5/3/23	Add monitoring points	BTM

**LEGEND**

- Property Line
- Life of Mine Boundary
- Stream/Edge of Water Structure
- Unpaved Road
- Paved Road
- Stormwater Conveyance
- Federal Wetland Boundary
- 425' Federal Wetland Setback
- MW1S
- MW1
- Miller Well
- SG2
- 4816
- 4881
- 4929
- Shallow Monitoring Well To Be Monitored
- Bedrock Monitoring Well To Be Monitored
- Residential Well To Be Monitored
- Staff Gauge To Be Monitored
- Residential Location With No Well
- Residential Well Location With Address #
- Residence To Be Included In Extended Well Inventory

**SCALE**



**NOTES**

- Base Maps & Background Information**
1. Life of Mine derived from: Eagle Harbor Sand & Gravel, Inc. Eagle Harbor Mine Site Mining Plan Map by Advanced Environmental Geology, dated: 7/18/2014.
  2. Property Lines derived from: Eagle Harbor Sand & Gravel, Inc. Eagle Harbor Mine Site Mining Plan Map by Advanced Environmental Geology, dated: 7/18/2014 and Orleans County Tax Maps.
  3. Certain map features outside of survey area digitized from digital high resolution aerial orthophotos provided from the National Aerial Imagery Program (NAIP) and the NYSGIS Clearinghouse.

**AREA SUMMARY**

- Life Of Mine Area: 250.6+/- acres
- Bedrock Excavation Area: 99.7+/- acres
- Sand Mining/Stripping Area: 114.3+/- acres
- Extent Of Drawdown Impact Or 1000' From Proposed Quarry, Whichever Is Greater
- Extended Well Survey Area: 1/2 Mile From Proposed Quarry



## **Attachment A**



# Residential Water Supply Survey

Please use the back of this page and extra sheets as necessary.

Property Owner / Resident Name(s): \_\_\_\_\_

Phone Number: \_\_\_\_\_

Property Address: \_\_\_\_\_

Mailing Address (if different): \_\_\_\_\_

Has your residence been connected to the Public Water Supply Line? \_\_\_\_\_

Primary Water Supply (check one):

Public Water Line \_\_\_\_\_

Well on property: \_\_\_\_\_

Spring on property: \_\_\_\_\_

Well Data:

Well Depth: \_\_\_\_\_

Depth of Casing: \_\_\_\_\_

Type of Aquifer: \_\_\_\_\_

(bedrock OR sand and gravel, or Unknown):

Estimated Well Yield (gpm), if known:

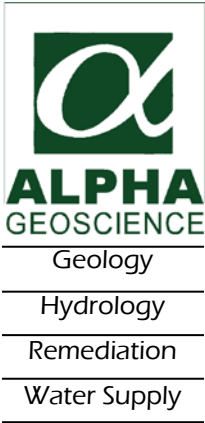
Well Driller: \_\_\_\_\_

Do you have a well log from the driller? \_\_\_\_\_

Are you willing to participate in the second phase of this well survey, as described in the accompanying

YES \_\_\_\_\_ NO \_\_\_\_\_

Completed by: \_\_\_\_\_ Date: \_\_\_\_\_



DATE

ADDRESS  
ADDRESS  
ADDRESS

Subject: Residential Well Survey – Eagle Harbor Sand and Gravel, Inc.

Dear \_\_\_\_\_:

Alpha Geoscience, on behalf of Eagle Harbor Sand & Gravel, Inc. (Eagle Harbor), requests your assistance in a residential well survey in the area of Eagle Harbor mine. The New York State Department of Environmental Conservation (NYSDEC) is requiring a residential well survey as part of the mine permitting process for the vertical expansion of the mine. The mine is located on the west side of Eagle Harbor Road, south of Maple Street, and east of Pine Hill Rd, in the Town of Barre, Orleans County. According to public records, you own land or reside at <ADDRESS>, in the vicinity of the site.

The purpose of the well survey is to develop an inventory of water supply wells located within ½-mile of the proposed quarry so that potential impacts from mine development to ground water and ground water users can be evaluated. The information from your well will serve as baseline of data for future reference as the mine is deepened.

To aid in this evaluation, please fill out the enclosed Residential Water Supply Survey form for your property at <ADDRESS>, as soon as possible, and mail it back in the enclosed, stamped envelope by <DATE>. While you may not be able to provide all of the requested information, any information you have about your well(s) and the ground water supply will be helpful. This is a valuable opportunity for you to have direct input to this study.

A second phase of this water supply well survey will be conducted within a few weeks of receiving the Residential Water Supply Survey form from you. The second phase will involve obtaining well water levels, well locations (GPS), well elevations (approximate), and water quality information at the residences/properties of citizens that are willing to participate. Please indicate your willingness to participate in the second phase of this water supply well survey on the enclosed form.

If you have any questions about the residential well survey, please contact me at (518) 348-6995.

Thank you for your time and assistance.

Sincerely,  
Alpha Geoscience

Steven M. Trader  
Geologist