



**U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE**

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 4/21/2021

ORM Number: NAE-2020-02363

Associated JDs: N/A

Review Area Location¹: State/Territory: Vermont City: Colchester County/Parish/Borough: Chittenden

Center Coordinates of Review Area: Latitude 44.490155 N Longitude -73.164255 W

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)²

§ 10 Name	§ 10 Size	§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters): ³				
(a)(1) Name	(a)(1) Size	(a)(1) Criteria	Rationale for (a)(1) Determination	
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination	
N/A.	N/A.	N/A.	N/A.	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size	(a)(3) Criteria	Rationale for (a)(3) Determination	
N/A.	N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size	(a)(4) Criteria	Rationale for (a)(4) Determination	
N/A.	N/A.	N/A.	N/A.	N/A.

¹ Map(s)/figure(s) are attached to the AJD provided to the requestor.

² If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.

³ A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.



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D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)). ⁴				
Exclusion Name	Exclusion Size		Exclusion ⁵	Rationale for Exclusion Determination
Lime Kiln Quarry West	2.37	acre(s)	(b)(8) Artificial lake/pond constructed or excavated in upland or a non-jurisdictional water, so long as the artificial lake or pond is not an impoundment of a jurisdictional water that meets (c)(6).	The Lime Kiln Quarry West is an artificial lake/pond that was constructed wholly in upland. The water-filled depression was constructed because of former mining operations. The quarry was active for lime extraction from the 1800's until 1971. The quarry is now abandoned and filled with rainwater.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

☒ Information submitted by, or on behalf of, the applicant/consultant: "Natural Resources Atlas-Location Map", dated "September 14, 2020" (Exhibit 1); Site plan titled "LIME KILN QUARRY WEST FILL SITE" dated "03/26/21," last revised "04/09/21" (Exhibit 2); "Declaratory Ruling" by the State of Vermont Water Resources Board, dated July 11, 2001 (Exhibit 3); "Findings of Fact" from the Agency of Natural Resources Department of Environmental Conservation Wastewater Management Division, dated October 16, 2001 (Exhibit 4); Letter from Benjamin D. Heath to the U.S. Army Corps of Engineers, dated "September 15, 2020" (Exhibit 5); "USGS Topo Map", dated "03/30/21" (Exhibit 6).

This information is sufficient for purposes of this AJD.

Rationale: Based on a September 22, 2020 site visit by the U.S. Army Corps of Engineers (Corps) and review of the above information provided by Benjamin D. Heath, the agent on behalf of J. Hutchins, Inc., the Lime Kiln Quarry West is a b(8) non-jurisdictional water. Lime Kiln Quarry West is an artificial lake/pond constructed in upland and is not an impoundment of jurisdictional waters. The site was reviewed for potential wetlands by a qualified consultant familiar with the Corps' methods for delineating wetlands and determined none were present. The Corps also confirmed the absence of wetlands and tributaries within the approved jurisdictional determination review area during the September 22, 2020 site visit.

- ☐ Data sheets prepared by the Corps: N/A
- ☒ Photographs: Aerial and Other: See Memorandum for Record dated "22 September 2020" including photographs and Google Earth Aerial Imagery (Exhibit 7)
- ☒ Corps site visit(s) conducted on: September 22, 2020 (see Memorandum for Record, Exhibit 7)
- ☐ Previous Jurisdictional Determinations (AJDs or PJDs): N/A

⁴ Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.

⁵ Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.



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- ☐ Antecedent Precipitation Tool: provide detailed discussion in Section III.B.
- ☐ USDA NRCS Soil Survey: N/A
- ☐ USFWS NWI maps: N/A
- ☒ USGS topographic maps: "USGS TOPO MAP," dated "03/30/21" (Exhibit 6)

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	Topographical map (Exhibit 6), USGS Stream Stats (Exhibit 8)
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	Vermont Interactive Map Viewer LiDAR and Floodplains (Exhibits 9 & 10)
Other Sources	N/A

B. Typical year assessment(s): N/A. The Lime Kiln Quarry West is not located within the floodplain of the Winooski River and is not inundated by flooding in a typical year from the Winooski River. Note, the (b)(8) exclusion applies regardless of whether an artificial lake/pond constructed in upland/non-jurisdictional waters is inundated by flooding from an (a)(1)-(3) water in a typical year.

C. Additional comments to support AJD: The Lime Kiln Quarry West is an artificial lake/pond excavated wholly in upland and excluded under (b)(8) of the Navigable Waters Protection Rule. The open water feature was created as a result of former mining operations for lime extraction (Exhibit 3). Operation of the mine ceased in 1971 and the mine is now considered abandoned. Note, the (b)(9) exclusion only applies to on-going mining operations and thus does not apply to Lime Kiln Quarry West.

The quarry has no defined inlet or outlet and is not an impoundment of jurisdictional waters. There are no tributaries or wetlands within the approved jurisdictional determination review area. The quarry fills with water from precipitation and forms an artificial lake/pond. Lime Kiln Quarry West is located to the north of the Winooski River, the nearest Traditional Navigable Water. The quarry is not located within the floodplain of the Winooski River and is not inundated by flooding in a typical year from the Winooski River (Exhibit 10).



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Angela C. Repella _____
Project Manager

Paul Minkin _____
NWPR AJD Team

Frank J. DelGiudice _____
Branch Chief

Robert J. DeSista _____
PATs Chief

Tammy R. Turley _____
Chief Regulatory Division

EXHIBIT 1



Natural Resources Atlas-Location Map

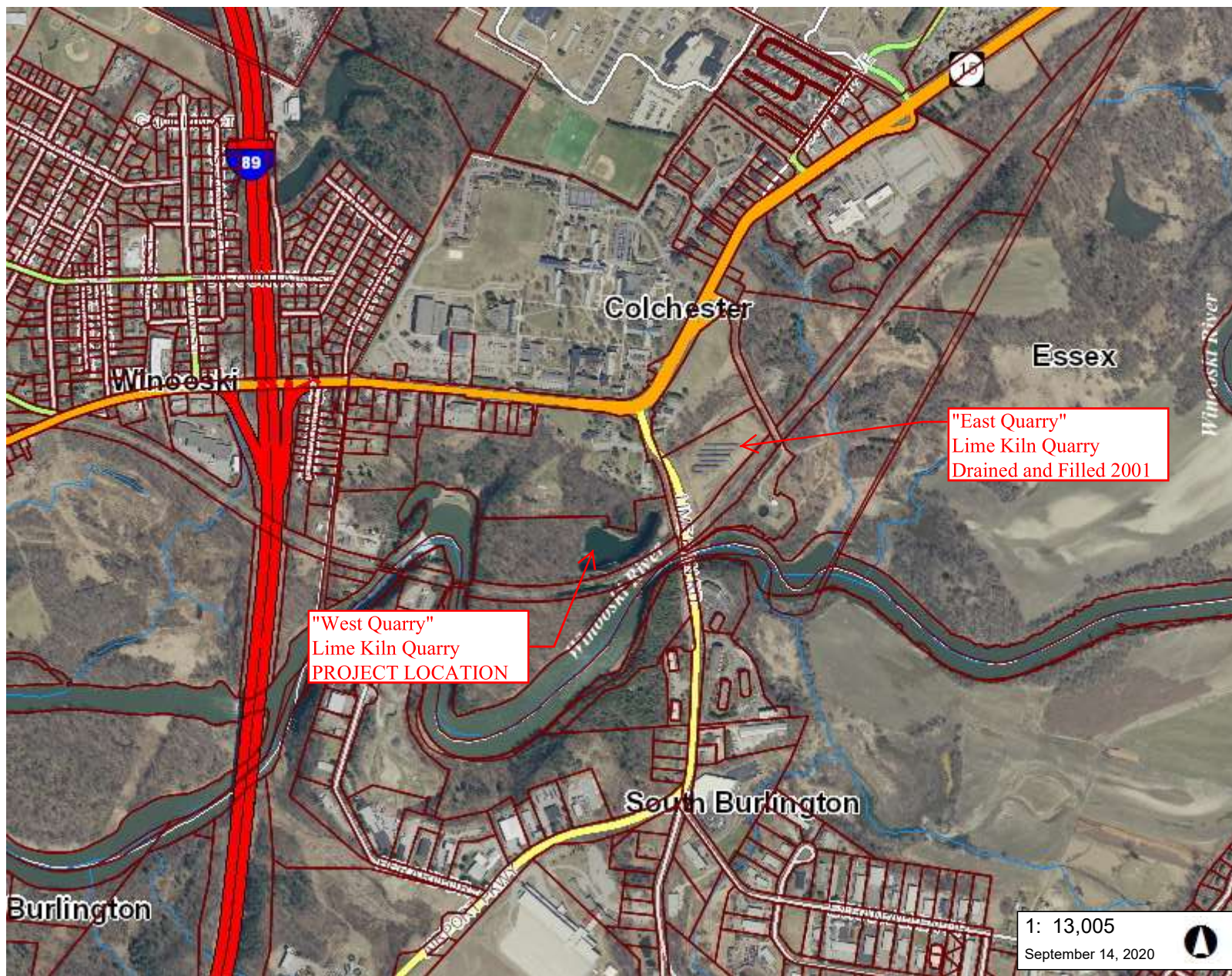
Vermont Agency of Natural Resources

vermont.gov



LEGEND

- Parcels (standardized)
- Parcels (non-standardized)
- Roads
 - Interstate
 - Principal Arterial
 - Minor Arterial
 - Major Collector
 - Minor Collector
 - Local
 - Not part of function Classification S
- Stream/River
- Town Boundary



1: 13,005

September 14, 2020



661.0 0 330.00 661.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere

© Vermont Agency of Natural Resources

1" = 1084 Ft.

1cm = 130 Meters

THIS MAP IS NOT TO BE USED FOR NAVIGATION

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

NOTES

Map created using ANR's Natural Resources Atlas

State of Vermont
WATER RESOURCES BOARD

Re: Lime Kiln Quarries
Town of Colchester, Vermont

Docket No. WET-01-04DR

DECLARATORY RULING

Saint Michael's College (Saint Michael's), through its consultant, EIV Technical Services, petitions the Water Resources Board (Board) to issue a declaratory ruling that two quarries, known as the Lime Kiln Quarries, in the Town of Colchester, Vermont, and identified as wetlands on the Vermont Significant Wetland Inventory (VSWI) Maps, are not wetlands. The Board determines pursuant to 3 V.S.A. § 808 (1995), 10 V.S.A. § 905(7) (1999), and Board Rule of Procedure 16(B) that the Lime Kiln Quarries are not wetlands within the meaning of the Vermont Wetland Rules (VWR) and that the VSWI maps should be updated accordingly.

I. PROCEDURAL HISTORY

Saint Michael's filed its petition for a declaratory ruling with the Board on June 27, 2001. On June 29, 2001, the Board's Executive Officer determined that the petition had been filed in substantial compliance with the Board's Rules of Procedure, docketed the petition, and sent Saint Michael's a letter of acknowledgment. The petition includes a certification of support signed by wetland biologist April Moulart from the Wetlands Office of the Agency of Natural Resources (ANR). Under Board Rule of Procedure 16(B), a petition for a declaratory ruling is reviewed as a contested case.

The petition identifies the persons whose interests may be affected by issuance of the relief requested, as required by Board Rule of Procedure 16(B)(2). On June 29, 2001, the Board provided personal notice of the petition to persons required to receive notice pursuant to Board Rule of Procedure 22. In addition, the Board published notice of the petition in the Burlington Free Press on July 2, 2001. In accordance with Board Rule of Procedure 22, the Board provided 7 days from the issuance of written notice for interested persons to file written comments or to request a hearing.

The deadline to file written comments or to request a hearing (or both) was July 9, 2001. No comments were filed, and no person requested a hearing. Accordingly, the Board did not hold a hearing in this matter.

At its regular meeting on July 10, 2001, the Board deliberated with respect to the petition. The Board's deliberations were based solely on the information in the petition. As set forth herein, the Board grants the petition for a declaratory ruling.

II. FINDINGS OF FACT

1. The Lime Kiln Quarries are located in the Town of Colchester, on either side of Lime Kiln Road, between Route 15 and the Winooski River, on the property of Saint Michael's College.
2. VSWI Map 13A denotes the Lime Kiln Quarries as palustrine open-water intermittently exposed/permanent wetlands (POWZ). (The petition includes a copy of the area of the VSWI map depicting the Lime Kiln Quarries. A copy of that map is attached.)
3. The Lime Kiln Quarries were active lime quarries from the mid 1800's through 1971. The quarries have been abandoned since that time and have filled with water, mostly from rain, with some surface runoff. The water level in the quarries is approximately 22 feet above the water surface of the nearby Winooski River.
4. The surface area of the east quarry is 1.75 acres, and the west quarry has a surface area of 2.25 acres. The quarry walls are roughly vertical. The median height of the walls is 110 feet. The water depth in the quarries is approximately 50 feet, although abandoned equipment reaches closer to the water's surface. An underwater tunnel beneath Lime Kiln Road connects the two quarries.
5. The Lime Kiln Quarries lack wetland hydrology, wetland soils, and wetland vegetation.
6. Wetland biologist April Moulaert from ANR's Wetlands Office visited the Lime Kiln quarries on June 19, 2001, and concluded that the quarries do not constitute wetlands under the VWR.

III. CONCLUSIONS OF LAW

The Board has the power and duty to protect significant wetlands. See 10 V.S.A. §§ 905(7)-(9). Under the VWR, an area identified as a wetland on the VSWI maps is presumed to be a significant wetland. VWR § 4.2.b. However, not all areas designated as wetlands on the VSWI maps are in fact wetlands within the jurisdiction of the VWR. Re: Shirley Urie, No. WET-96-04DR, Decision at 2 (Vt. Water Res. Bd. Jan. 8, 1997). To be considered a wetland under the Vermont Wetland Rules, an area must be characterized by hydric soils, hydrophytic vegetation, and wetland hydrology. See VWR § 3.2.a. See also VWR §§ 2.14, 2.15, 2.29, 2.31 (defining hydric soils, hydrophytic vegetation, wetlands, and wetland hydrology, respectively).

The Board has the authority to issue declaratory rulings as to the applicability of laws within its jurisdiction. See 3 V.S.A. § 808 (1995), Board Rule of Procedure 16(B). The Board's authority to issue declaratory rulings extends to declaring that a particular body of water or other

Re: Lime Kiln Quarries, No. WET-01-04DR
Declaratory Ruling (Vt. Water Res. Bd. July 11, 2001)
Page 3

feature identified as a wetland on the VSWI maps is not a wetland. Re: Stanley Gawet (Marble Quarry), No. WET-95-03DR, Decision (Vt. Water Res. Bd. Feb. 15, 1996); Re: Gold Stone Marble Co. Quarry, No. WET-91-03DR, Decision (Vt. Water Res. Bd. Oct. 30, 1991).

The Lime Kiln Quarries appear on VSWI Map 13A. However, the Board concludes that these quarries are not wetlands. The Board reaches this conclusion on the basis of the uncontroverted evaluation of the quarries performed by Saint Michael's, through its consultant, EIV Technical Services. That evaluation is credible in that it thoroughly investigated the quarries according to the criteria for identifying wetlands specified in the Vermont Wetland Rules and because the evaluation was supported by ANR's Wetlands Office.

IV. ORDER

The Lime Kiln Quarries, located in the Town of Colchester, currently classified as significant wetlands, are hereby declared not to be wetlands within the meaning of the Vermont Wetland Rules. The Wetlands Office shall update the VSWI map accordingly.

Dated at Montpelier, Vermont this 11th day of July, 2001.

WATER RESOURCES BOARD



David J. Blythe, Chair

Concurring:

Lawrence H. Bruce, Jr., Member
Jane Potvin, Member
John D. E. Roberts, Vice Chair
Mardee Sánchez, Member

FAUSERS\ DANIEL\ DL\ LIMEKILN\ ORDER.(1)

EXHIBIT 4

AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WASTEWATER MANAGEMENT DIVISION
103 SOUTH MAIN STREET
WATERBURY, VT 05671-0405

ORDER No. 7-0113

IN THE MATTER OF: **Saint Michael's College**
 Winooski Park
 Colchester, VT 05446

In accordance with the provisions of 10 V.S.A. Section 1272, the Secretary ("Secretary") of the Agency of Natural Resources ("Agency") makes the following:

FINDINGS OF FACT

- A. Saint Michael's College (SMC) owns the abandoned Lime Quarry located on Lime Kiln Road, Colchester, Vermont.
- B. The quarry is divided into two sections - the East and West - which are connected by a large tunnel under Lime Kiln Road. The surface area is 5.2 acres with an average water depth of 50 feet.
- C. SMC has contracted with the Town of Colchester (Town) who has contracted with the Agency of Transportation (VTrans) who has contracted with George R Cairns and Sons (Cairns) to complete the project. Cairns proposes to dewater both sections of the quarry since they are connected and fill, with earth borrow, the East portion only. An estimated 85 million gallons of water would need to be removed.
- D. Four pumps capable of pumping 2,840 gpm (approximately 4 million gallons per day) of water are proposed to be powered by a diesel generator located at the rim of the quarry.
- E. The discharged water will travel across the railroad through 4 - 4" HDPE DR 11 pipes and discharge directly to the Winooski River via a stable open rock face.
- F. Following the initial drawdown which is anticipated to last up to 45 days, three of the pumps will be removed and one pump will continue to discharge the anticipated groundwater entering the quarry (expected to be less than 500 gpd) until no later than September 1, 2002.
- G. SMC, is requesting authorization from the Department of Environmental Conservation to discharge the accumulated water to the Winooski River.

In accordance with the provisions of 10 V.S.A. Section 1272, the Secretary, based upon the findings of fact, hereby issues the following:

ORDER

The proposed discharge of accumulated quarry water by SMC constitutes an activity that is subject to Title 10, Chapter 47, Section 1272. The Secretary hereby authorizes SMC to discharge accumulated quarry water from the Lime Quarry located in Colchester, Vermont to the Winooski River according to the following conditions:

1. SMC, through the VTrans consultant Cairns, shall operate and maintain the discharge such that the turbidity discharged to the Winooski River does not exceed 10 NTU (October 1 through May 31) and 25 NTU (June 1 through September 30).
2. SMC shall limit the volume of accumulated quarry water discharged to the Winooski River to approximately 4.1 million gallons per day.
6. SMC shall collect and analyze the discharge of accumulated quarry water a minimum of twice per week during the 45 day initial dewatering which is scheduled to begin on or about October 29, 2001. Following the initial dewatering, SMC shall collect and analyze the discharge of accumulated quarry water once per week. Samples shall be collected prior to discharge to the Winooski River.
7. Should the discharge exceed the effluent limitations specified in condition 1. or cause erosion at any time, SMC shall:
 - a. Notify the Wastewater Management Division (802-241-3822) within 24 hours.
 - b. Submit a written report within 5 days detailing the reason(s) for the violation and the procedures to be employed so that the discharge will once again be in compliance with the effluent limitations.
 - c. The Wastewater Management Division will evaluate the situation on a case-by-case basis and may require SMC to cease discharging until such time as treatment is provided to ensure that the discharge will consistently meet effluent limitations.
8. The results of all discharge monitoring shall be submitted monthly, to be received by the 15th of the following month, to the address below:

Vermont Agency of Natural Resources
Department of Environmental Conservation
Wastewater Management Division
103 South Main Street
Waterbury, Vermont 05671-0405

9. In the event that this discharge of accumulated quarry water is expected to continue beyond December 15, 2001, SMC shall apply for a discharge permit by November 30, 2001.

This order shall expire on March 31, 2002.

Christopher Recchia, Commissioner
Department of Environmental Conservation

by 
Marilyn J Davis, Director
Wastewater Management Division

Signed this 16th day of October, 2001.

EXHIBIT 5

DONALD L. HAMLIN
CONSULTING ENGINEERS, INC.
ENGINEERS AND LAND SURVEYORS

Please reply to:

P.O. Box 9
Essex Junction
Vermont 05453

136 Pearl Street
Essex Junction, Vermont

Tel. (802) 878-3956
Fax (802) 878-2679
www.dlhce.com

September 15, 2020

Mr. Michael S. Adams
Senior Project Manager
U.S. Army Corps of Engineers
New England District
11 Lincoln Street, Room 210
Essex Junction, VT 05452

Dear Mr. Adams:

Saint Michael's College (SMC) currently owns the Saint Michael's Lime Kiln Quarry, located adjacent to Lime Kiln Road in Colchester, Vermont (See attached Location Plan). In 2001 SMC was granted permits to drain and fill the East and West Lime Kiln Quarries, along with the tunnel beneath Lime Kiln Road which connected the two quarries. In 2001, the East Lime Kiln Quarry and the tunnel were drained and filled, but the West Lime Kiln Quarry remains, and has refilled with surface water. SMC recently performed a boundary line adjustment to parcel off the West Lime Kiln Quarry site (See attached Boundary Adjustment Plan). J. Hutchins, Inc. is in the process of purchasing the parcel of land containing the SMC West Lime Kiln Quarry. J. Hutchins, Inc. plans to complete the previously permitted project by draining the water from the West Lime Kiln Quarry into the Winooski River, and filling the quarry with earthen and construction materials. Our firm is assisting J. Hutchins, Inc. to obtain the necessary permits to drain and fill the SMC West Lime Kiln Quarry site.

Our firm assisted Saint Michael's College with the permitting in 2001, and we have attached a Memo from EIV Technical Services, LLC describing the permit path for that project. The Memo indicates that on May 22, 2001, Marty Abair, Permit Project Manager US Army Corps of Engineers (USACE), stated that no permit was required for the project. We have also reviewed the Department of Defense 33 CFP Part 328 The Navigable Water Protection Rule: Definition of "Waters of the United States" where "Jurisdictional Waters" are defined. §328.3 excludes the following from the definition of "Jurisdictional Water": *Artificial Lakes and ponds, including water storage reservoirs and farm, irrigation, stock water, and log cleaning ponds, constructed or excavated in upland or in non-jurisdictional water; water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel.* See attached except from the Rule. It is our understanding that the existing quarry was constructed in upland, was not formally a jurisdictional water, and therefore is currently not a Jurisdictional Water.

The project proposed by J. Hutchins, Inc. includes draining water from the West Lime Kiln Quarry, discharging the clean quarry water into the Winooski River, and filling the West Lime Kiln Quarry with earthen and construction materials. It is our understanding that a permit from the U.S. Army Corps of Engineers is not required for this project. Can you please confirm? Attached you will find a complete Request for Corps Jurisdictional Determination.

Respectfully,



Benjamin D. Heath, P.E.
Vice President

enc.

EXHIBIT 6

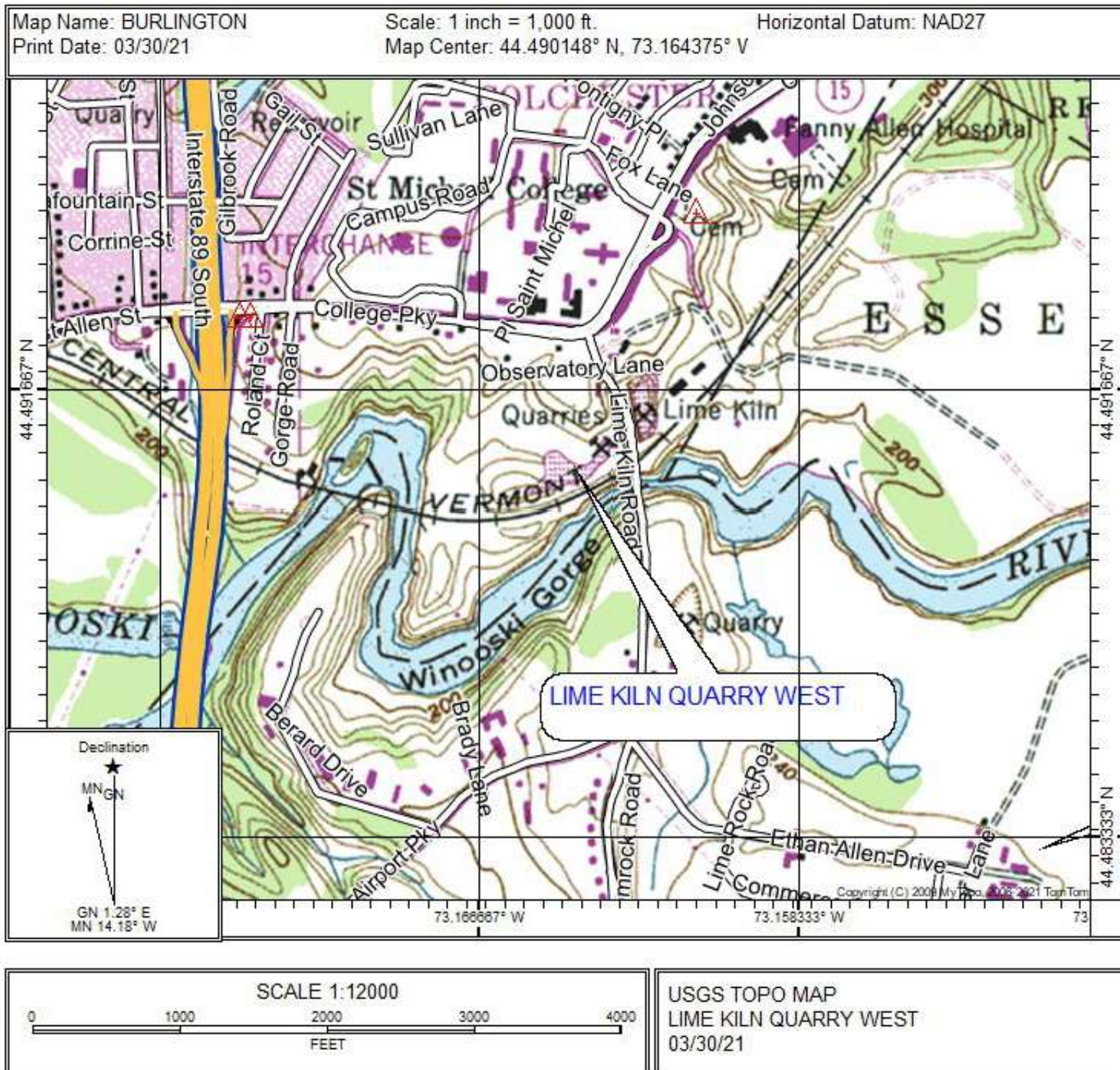


EXHIBIT 7

CENAE-R-63

22 September 2020

MEMORANDUM FOR The File

SUBJECT: NAE-2020-02363
Benjamin D. Heath
Approved Jurisdictional Determination
Lime Kiln Quarry West
Lime Kiln Road, Colchester, Vermont

On 22 September 2020 I met with Benjamin D. Heath at the Lime Kiln Quarry West site located off Lime Kiln Road in Colchester, Vermont.

The purpose of the site visit was to investigate the jurisdictional status of the existing quarry located on the property of Saint Michael's College (SMC), referred to as "Lime Kiln Quarry West". Per a Declaratory Ruling from the State of Vermont, dated July 11, 2001, the quarry was an active lime quarry from the mid 1800's until 1971 and has since been abandoned (see file for record). J Hutchins, Inc. is in the process of purchasing the parcel containing Lime Kiln Quarry West to use as a disposal site for earthen and construction materials. The intent is to drain and fill the quarry. Water drained from the quarry will be discharged to the Winooski River, a Traditional Navigable Water (TNW) located to the south of the parcel.

The property was reviewed in 2020 for the potential presence of wetlands and Rare, Threatened, and Endangered (RTE) species by Gilman and Briggs Environmental. Wetlands were not identified within the area of impact.

We walked the perimeter of the quarry. There appeared to be no defined outlet from the open water feature. Lime Kiln Quarry West was formerly connected to Lime Kiln Quarry East via a tunnel beneath Lime Kiln Road. Lime Kiln Quarry East was previously filled (in/around 2001) which blocked the connection between the two quarries (see aerial photos below). I confirmed the absence of wetlands surrounding the quarry. It is reasonable to assume the quarry was originally constructed in upland.

We walked to the edge of the Winooski River where clean water will be discharged from the quarry into the river. Water will be pumped from the quarry and discharged landward of the ordinary high water mark (OHWM) of the Winooski River. A permit is not likely required for the discharge of water into the Winooski River since it appears the work will not involve the placement of fill, work, or structures that extend beyond the OHWM of the river. Heath will provide plans showing the limits of this work so the Corps may confirm permit requirements.

I photographed the site and we departed.

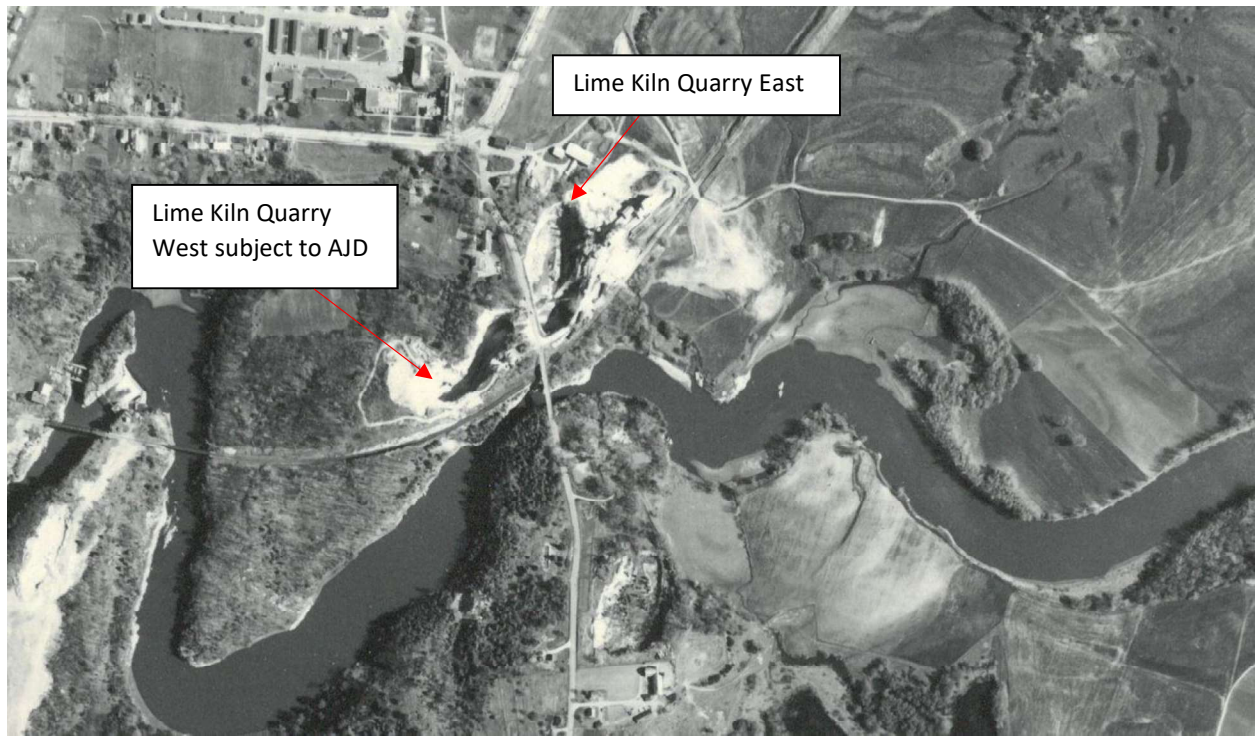
Angela C. Repella
Senior Project Manager



1999-2000 Google Earth Aerial Imagery. Lime Kiln Quarry East and West visible.



2019 Google Earth Aerial Imagery – Lime Kiln Quarry East now filled



1962 Vermont State aerial photo. Lime Kiln Quarry East and West during construction.

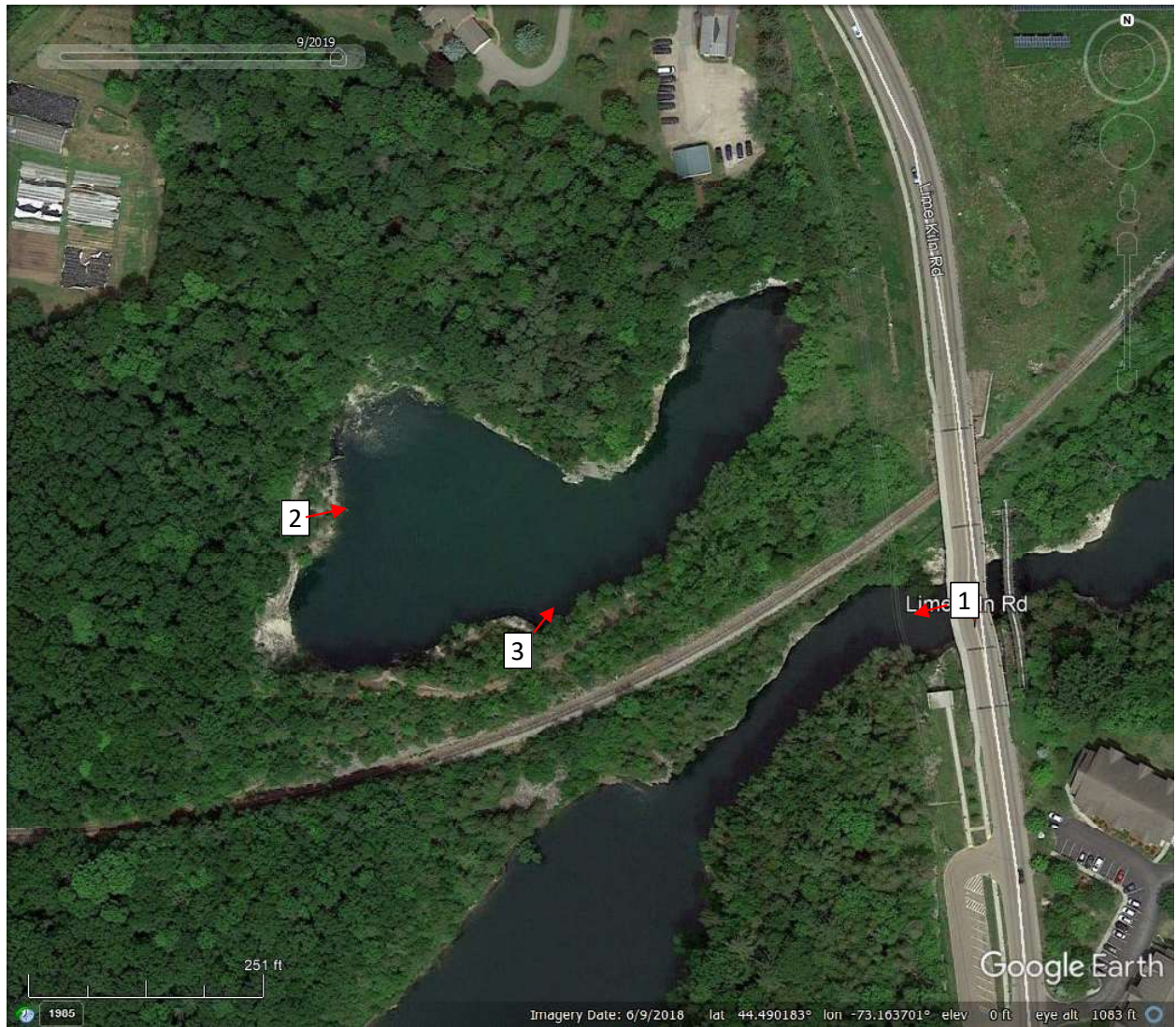
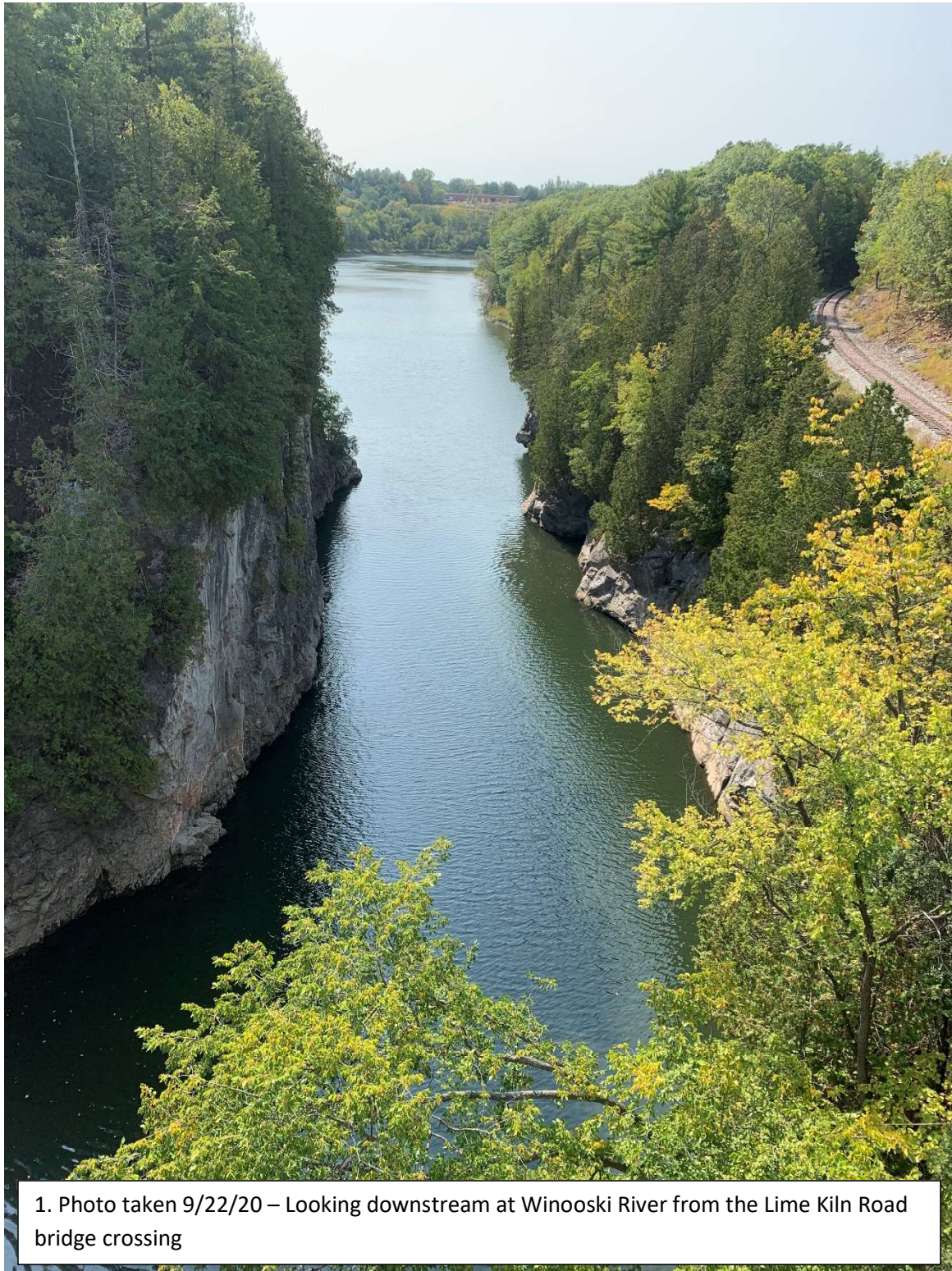
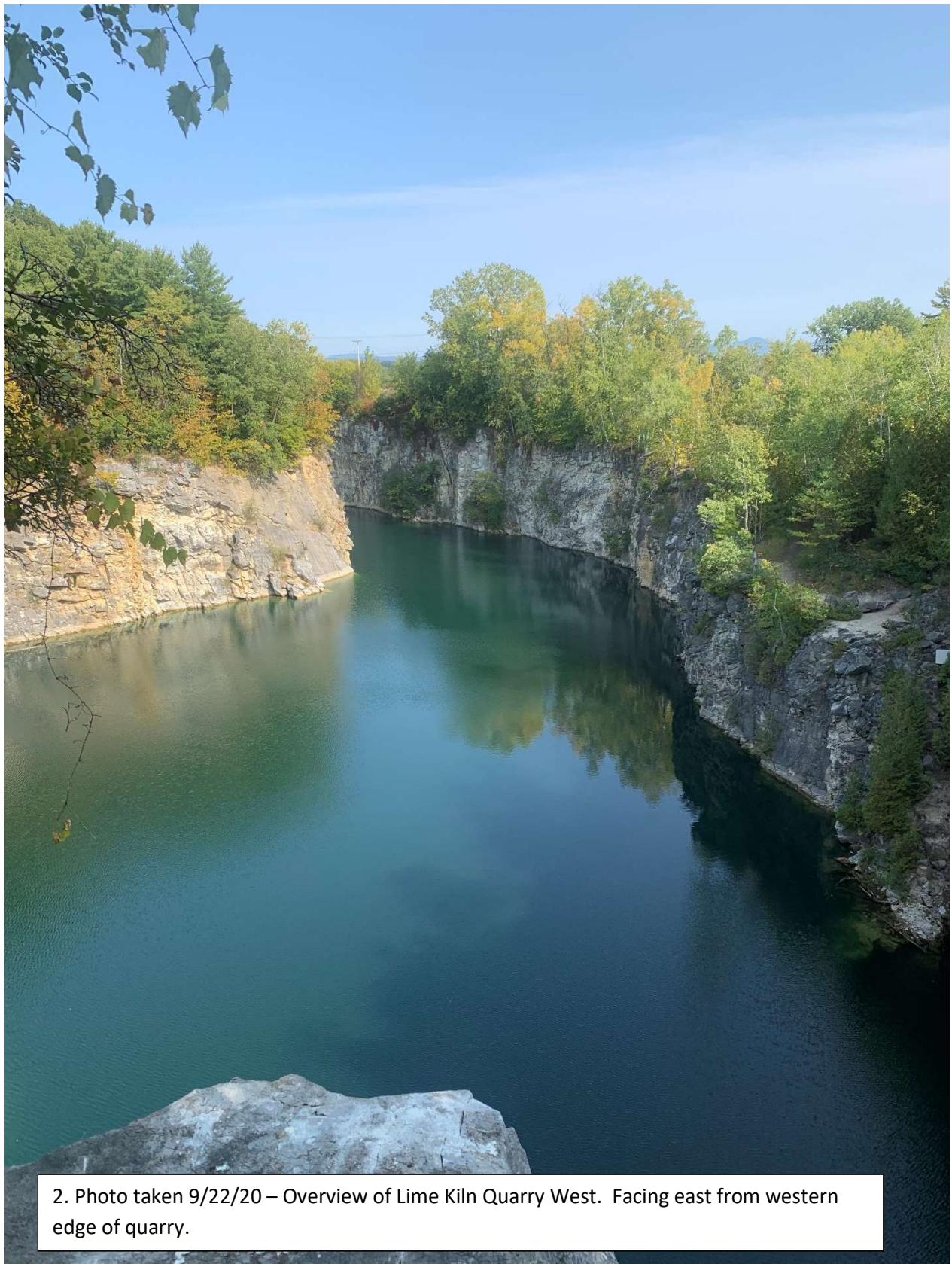


PHOTO LOCATIONS



1. Photo taken 9/22/20 – Looking downstream at Winooski River from the Lime Kiln Road bridge crossing



2. Photo taken 9/22/20 – Overview of Lime Kiln Quarry West. Facing east from western edge of quarry.



3. Photo taken 9/22/20 – Facing northeast at eastern edge of quarry. Former connection between east and west quarry beneath Lime Kiln Road would be located along eastern edge

EXHIBIT 8

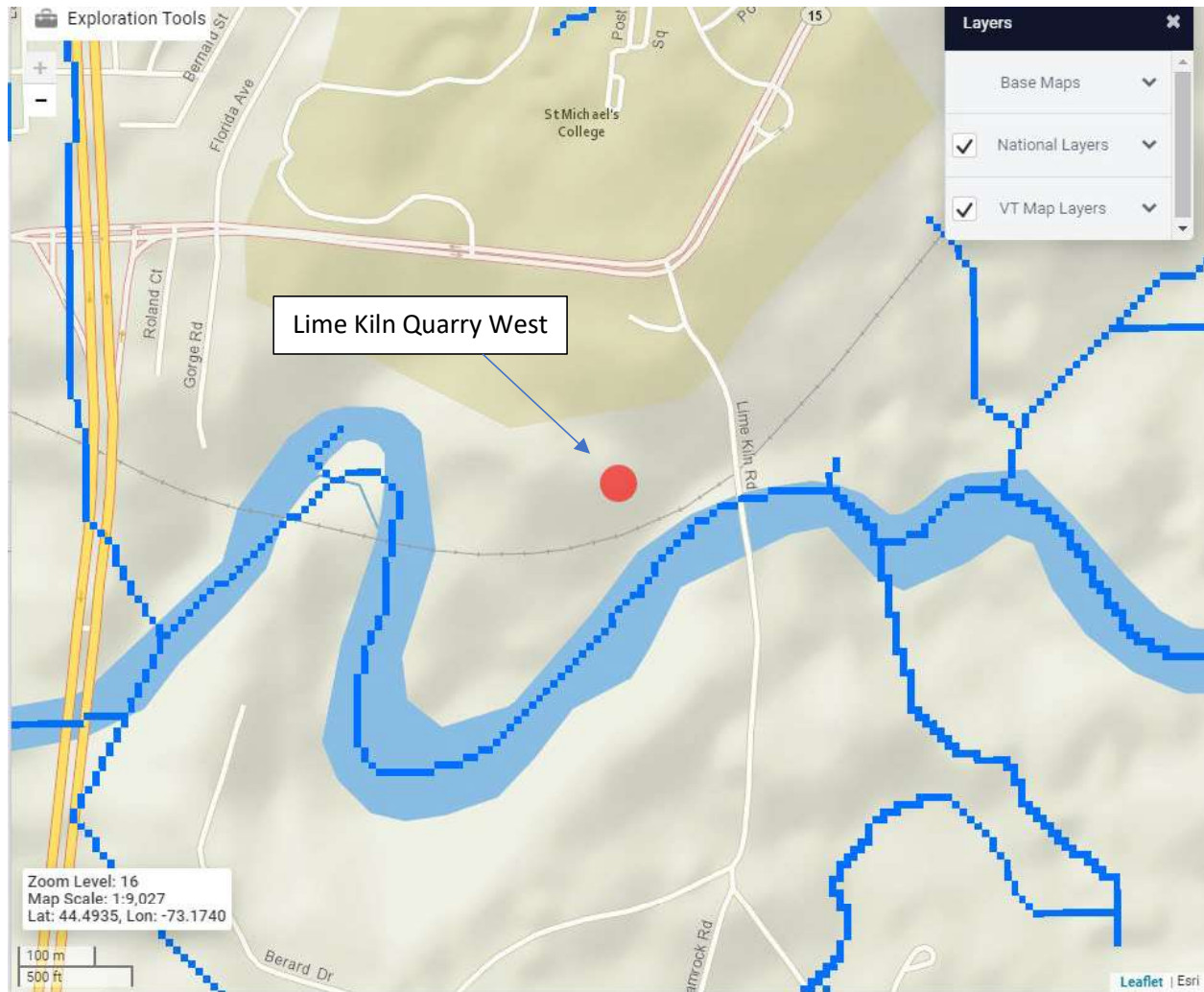


EXHIBIT 9



VT Interactive Map Viewer - Lime Kiln Quarry West

Vermont Center for Geographic Information

vermont.gov



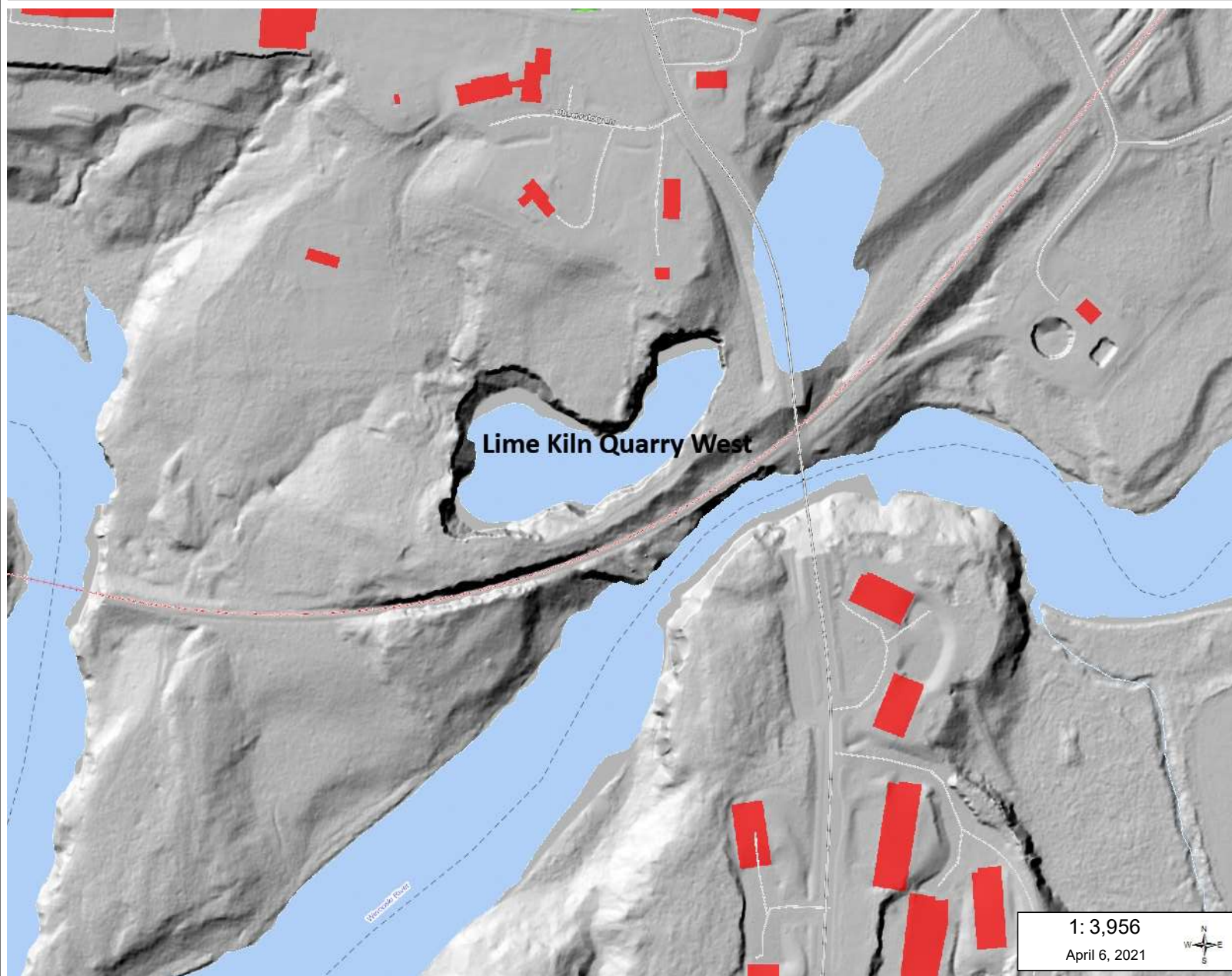
LEGEND

- Airports
- Rail Lines
- Town Boundaries
- County Boundaries
- Buildings
- Village Boundaries
- Buildings footprints
- VT State Boundary



NOTES

This map was created with the VT Interactive Map Viewer.



WGS_1984_Web_Mercator_Auxiliary_Sphere
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EXHIBIT 10



VT Interactive Map Viewer - Floodplain

Vermont Center for Geographic Information

vermont.gov



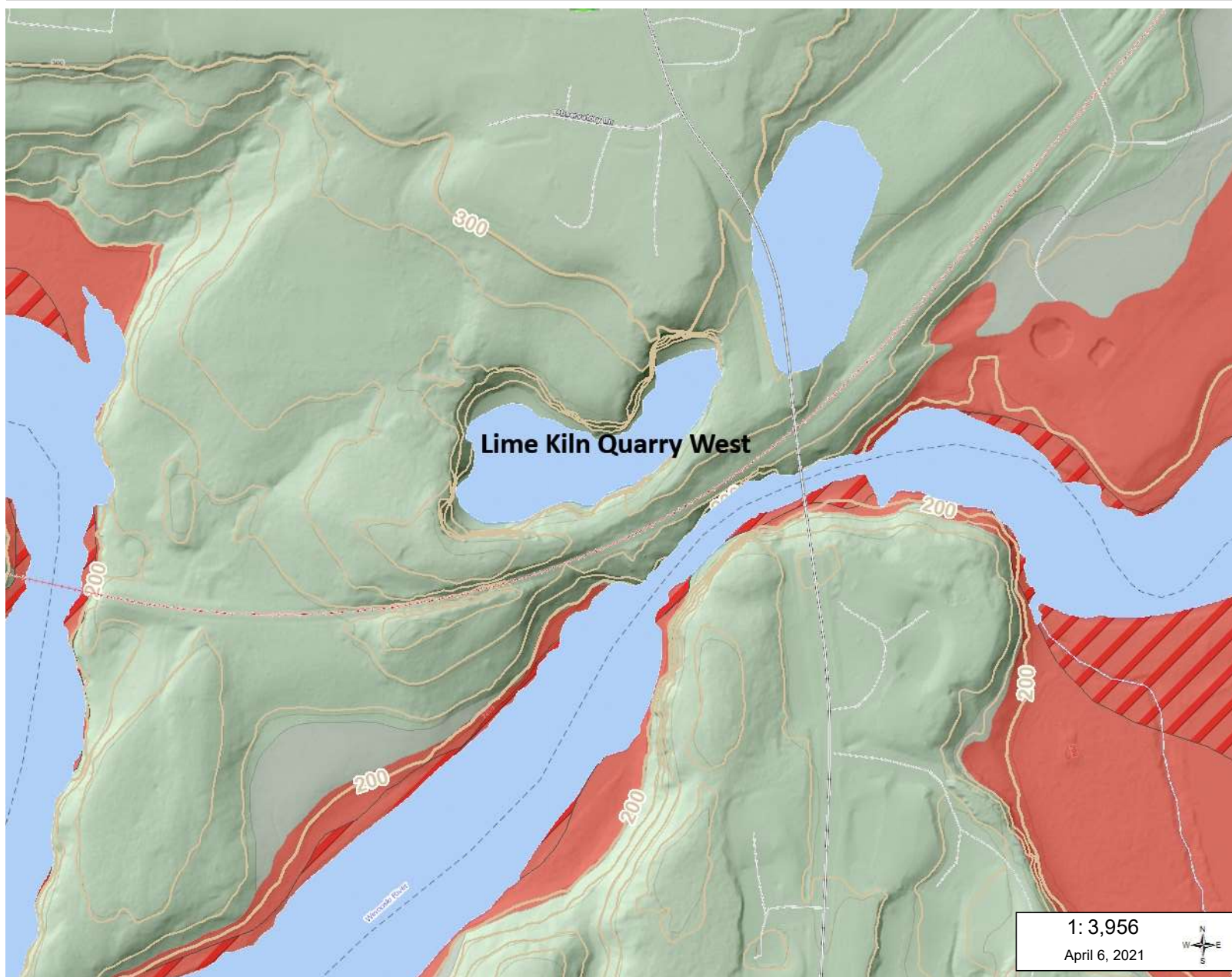
LEGEND

- Airports
- Rail Lines
- Town Boundaries
- County Boundaries
- Buildings
- Village Boundaries
- DFIRM Floodways
- Flood Hazard Areas (Only FEM)
 - AE (1-percent annual chance flood)
 - A (1-percent annual chance flood)
 - AO (1-percent annual chance zone feet)
 - 0.2-percent annual chance flood ha
- VT State Boundary



NOTES

This map was created with the VT Interactive Map Viewer.



1: 3,956

April 6, 2021



0.12 0 0.06 0.12 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere
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THIS MAP IS NOT TO BE USED FOR NAVIGATION

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