DECISION DOCUMENT

Old Champlain Mill Brownfield Cleanup Program Whitehall, Washington County Site No. C558036 November 2017



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

Old Champlain Mill Brownfield Cleanup Program Whitehall, Washington County Site No. C558036 November 2017

Statement of Purpose and Basis

This document presents the remedy for the Old Champlain Mill site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Old Champlain Mill site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy: Track 2 – Monitored Natural Attenuation Remedy are as follows:

1. Remedial Design:

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- reducing direct and indirect greenhouse gases and other emissions;
- increasing energy efficiency and minimizing use of non-renewable energy;
- conserving and efficiently managing resources and materials;
- reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- maximizing habitat value and creating habitat when possible;
- fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Monitored Natural Attenuation:

Groundwater contamination will be addressed with monitored natural attenuation (MNA). Groundwater will be monitored for site related contamination and also for MNA indicators which will provide an understanding of the biological activity breaking down the contamination. Natural anaerobic biodegradation at the site was evaluated by Hatch Mott MacDonald in January of 2013. Their evaluation of site data indicates natural and ongoing breakdown of chlorinated ethenes. It is anticipated that contamination will decrease by an order of magnitude in a reasonable period of time (5 to 10 years). Reports of the attenuation will be provided at 5 and 10 years, and active remediation will be proposed if it appears that natural processes alone will not address the contamination. The contingency remedial action will depend on the information collected, but it is currently anticipated that an insitu chemical oxidation (ISCO) technology would be the expected contingency remedial action.

3. Institutional Control:

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for commercial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH and;
- require compliance with the Department approved Site Management Plan.

4. Site Management Plan: Site Management Plan:

A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement as discussed in Paragraph 3 above.

This plan includes, but may not be limited to:

- an excavation plan which details the provisions for management of any future excavations on the site;
- a provision for further investigation and remediation should any redevelopment occur, if any of the existing structures are demolished, or if the subsurface is otherwise made accessible. This includes areas the of former buildings (currently concrete slabs) and the brick stack.

- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion in future buildings developed at the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.
- b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
 - monitoring of the groundwater to assess the performance and effectiveness of the remedy;
 - a schedule of monitoring and frequency of submittals to the Department;
 - monitoring for vapor intrusion for any future building developed or prior to occupancy of current building on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

November 27, 2017

Eric Obrecht, Director Remedial Bureau A

DECISION DOCUMENT

Old Champlain Mill Whitehall, Washington County Site No. C558036 November 2017

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

The Whitehall Free Library Attn: Reference Librarian 12 William Street Whitehall, NY 12887 Phone: 518-499-1366

NYSDEC Region 5 Attn: Michael McLean 1115 NYS Route 86, PO Box 296 Ray Brook, NY 12977-0296 Phone: 518-897-1254

Village of Whitehall Clerk 1 Saunders Street Whitehall, NY 12887 Phone: 518-499-0871

Receive Site Citizen Participation Information by E-mail

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The site is 11.49 acres in size and located in a commercial area at 16-50 Poultney Street in the Village of Whitehall, Washington County. The site is bounded by Wood Creek to the east, the Champlain Canal to the west, and Poultney Street (NYS Route 4) to the north.

Site Features: The site is currently vacant and predominant features include a concrete slab foundation from the former manufacturing building, a large brick smoke stack, and a small municipally owned and maintained sewage pump station. The majority of the site is open with some trees found predominantly within the northwestern sections of the site, and wetlands in the northwestern and southeastern portions of the property. Man-made earthen dikes line the eastern and western property boundaries and serve to protect the site from flooding from the adjacent Wood Creek and Champlain Canal respectively. The adjoining property to the south is owned by the Clarendon & Pittsford Rail Road. Inactive hazardous waste disposal site no. 558019, Poultney Street Site - is located within the rail road property.

Current Zoning and Land Use: The site is commercially zoned in the Village of Whitehall and is currently vacant. A small, active sewage pump station is present on the south east portion of the site.

Past Use of the Site: The site was first developed in the early 1900s and used as a silk knitting mill until 1959. From 1959 until 2001 the site was used to manufacture newspaper vending machines. The on-site buildings, including a 120,000 square foot manufacturing building and a 5,000 square foot power house, were demolished in 2003.

Site Geology and Hydrogeology: Site geology consists of fill material, underlain by alluvial sediments (sands, silts and clays). Depth to groundwater is approximately four feet below grade, and generally flows to the north, east and west. Eight distinct wetlands were identified at the site,

two are connected to Wood Creek and considered federally regulated. Bedrock is approximately 50 to 100 feet below existing grades.

A site location map is attached as Figure 1. Further site detail is attached at Figure 2.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. The Department has determined that this site does not pose a significant threat to public health or the environment; accordingly no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- surface water
- sediment

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

- benzo(a)anthracene
- benzo(a)pyrene
- •benzo(b)fluoranthene
- dibenzo[a,h]anthracene
- indeno(1,2,3-CD)pyrene

- vinyl chloride
- trans-1.2-dichloroethene
- cis-1,2-dichloroethene
- trichloroethene (TCE)
- dibenzo(b)fluoranthene

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil

6.2: <u>Interim Remedial Measures</u>

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by this site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, and groundwater resources. The November 2014 Remedial Investigation Report presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination: Numerous samples were taken at the site from surface and subsurface soils, surface water, groundwater, and sediments and analyzed for the following: VOCs, SVOCs, pesticides/PCBs, and metals. Previous uses of the site as a knitting mill and a vending machine manufacturer have resulted in contamination in the site's soil and groundwater

Groundwater: Twenty groundwater samples were collected and analyzed at the site. The primary groundwater contaminants of concern are volatile organic compounds (VOCs) including trichloroethene (TCE) and its breakdown products cis-1,2-dichloroethene, trans-1,2dichloroethene, and vinyl chloride. While TCE contaminant concentrations range from 5.5 to 69 parts per billion (ppb), the breakdown product contaminant concentrations were more prevalent and generally higher concentrations ranging from 6 to 6,600 ppb of cis-1,2-dichloroethene, 5.2 to 35 ppb for trans-1,2-dichloroethene, and 2.1 to 1,800 ppb for vinyl chloride. The groundwater plume appears to be concentrated in the northwestern portion of the site in the general vicinity of monitoring well BMW-19A. Two semi-volatile organic compounds (SVOCs) benzo(a)pyrene at 0.17 ppb and indeno(1,2,3-cd) pyrene at 0.73 ppb were detected slightly above their respective standards, criteria and guidance (SCGs) values at one sampling location. There were detections of metals in the groundwater which included one location for lead, five locations for sodium, with iron (12 of 15) and manganese (11 of 15) being the most prevalent. None of the metals are considered site related contaminants of concern. PCBs and pesticides were not detected in groundwater. Initial groundwater sampling was conducted in 2010. The latest sampling round in 2014 compared to data sets from 2007, 2010, and 2012 reflected a similar and stabilized on-site plume with evidence of on-going natural contaminant degradation and no off-site impacts.

Surface Soil: Eighteen surface soil (0–2 inches) samples were collected and analyzed at the site. Six semi-volatile organic compounds (SVOCs) including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(b)fluoranthene, dibenz(a,h)anthracene and indeno(1,2,3-cd)pyrene were detected above commercial use SCGs at only one sampling location, benzo(a)pyrene was found in two additional surface soil locations.VOCs, metals, PCBs and pesticides were not detected in surface soils. No surface soil samples were collected off site.

Subsurface Soil: Thirteen subsurface soil samples were collected from depths of 1 to 18 feet below grade for laboratory analysis. Benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene were detected in the subsurface soil at only one location above commercial use SCGs; arsenic was also identified in the subsurface soils at two locations above the SCG at 17.3 and 29.7 parts per million (ppm). VOCs, PCBs and pesticides were not detected in subsurface soils. A distinct contaminant source area could not be identified in the extensive soil sampling and investigation work conducted on the site. Subsurface soils under former structures/existing concrete slabs could not be fully evaluated. Provision for additional investigation will be included in the Site Management Plan should site development/subsurface work occur in these areas. Additionally, no off-site subsurface soil impacts were identified.

Wetland Surface Water: Acetone, iron, manganese, and sodium were the only parameters detected in wetland surface water above SCGs. Acetone was detected at one location at 51 ppb just above the SCG of 50 ppb. Iron was identified in all four samples ranging from 529 to 5,410 ppb, the SCG for iron is 300 ppb. Sodium was detected in wetland sample #7 located in close proximity to NYS Route 4 at 81,400 ppb, the SCG for sodium is 20,000 ppb.

Wetland Sediment: Seven metals (arsenic, cadmium, copper, iron, lead, nickel, and zinc) were detected at concentrations just above Class B Sediment Guidance Values (SGVs). Low Class B values are considered to be slightly contaminated. These metals were not identified in site soils above SCOs, and were not utilized at the site and thus are not considered COCs. Additionally, to give the identified contamination perspective, comparing the identified contaminant concentrations to Part 375 Soil clean-up objectives indicate they would meet residential use criteria. VOCs, SVOCs, PCBs and pesticides were not detected in sediment.

Based on the Fish and Wildlife Resource Characterization, there were no unique or unusual habitats identified, no endangered or threatened species were observed to exist at the site and no sensitive ecological resources were observed within the site. Although the Champlain Canal and Wood Creek are adjacent to the site, the man-made dikes prevent any direct surface runoff. Therefore, no complete exposure pathways were identified.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

The site is not fenced and persons who enter the site could contact contaminants in the soil by walking on the soil, digging or otherwise disturbing the soil. People are not coming into contact with the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site occupancy and/or development. Soil vapor intrusion concerns are limited on-site only.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal conditions to the extent practical
- Prevent the discharge of contaminants to surface water.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

• Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

• Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The elements of the selected remedy: Track 2 –Monitored Natural Attenuation Remedy are as follows:

1. Remedial Design:

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- reducing direct and indirect greenhouse gases and other emissions;
- increasing energy efficiency and minimizing use of non-renewable energy;
- conserving and efficiently managing resources and materials;

- reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- maximizing habitat value and creating habitat when possible;
- fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Monitored Natural Attenuation:

Groundwater contamination will be addressed with monitored natural attenuation (MNA). Groundwater will be monitored for site related contamination and also for MNA indicators which will provide an understanding of the biological activity breaking down the contamination. Natural anaerobic biodegradation at the site was also evaluated by Hatch Mott MacDonald in January of 2013. Their evaluation of site data indicates natural and ongoing breakdown of chlorinated ethenes. It is anticipated that contamination will decrease by an order of magnitude in a reasonable period of time (5 to 10 years). Reports of the attenuation will be provided at 5 and 10 years, and active remediation will be proposed if it appears that natural processes alone will not address the contamination. The contingency remedial action will depend on the information collected, but it is currently anticipated that an in-situ chemical oxidation (ISCO) technology would be the expected contingency remedial action.

3. Institutional Control:

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for commercial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH and;
- require compliance with the Department approved Site Management Plan.

4. Site Management Plan: Site Management Plan:

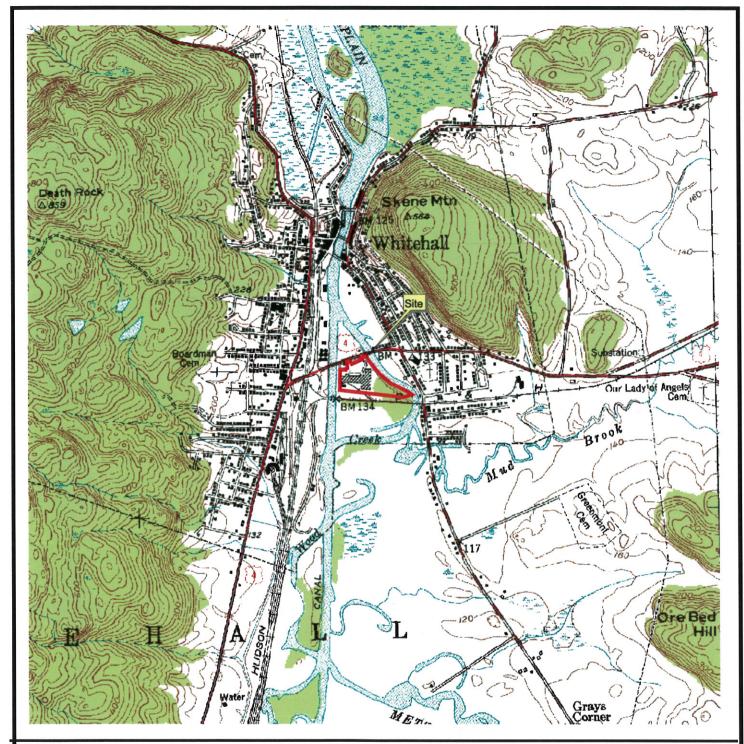
A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement as discussed in Paragraph 3 above.

This plan includes, but may not be limited to:

- an excavation plan which details the provisions for management of any future excavations on the site;
- a provision for further investigation and remediation should any redevelopment occur, if any of the existing structures are demolished, or if the subsurface is otherwise made accessible. This includes areas the of former buildings (currently concrete slabs) and the brick stack.
- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion in future buildings developed at the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.
- 5. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
 - monitoring of the groundwater to assess the performance and effectiveness of the remedy;
 - a schedule of monitoring and frequency of submittals to the Department;
 - monitoring for vapor intrusion for any future building developed or prior to occupancy of current building on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



MAP REFERENCE USGS Topographic Map Whitehall, NY Quadrangle, Dated 2000 7.5 Minute Series, NAD 83 UTM18N Topo downloaded from CUGIRon 7/8/10



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FIGURE 1 SITE LOCATION MAP

Old Champlain Mill

VILLAGE OF WHITEHALL SCALE: 1"=1,000' DRAFTER: JLM PROJECT NO: 06.6448