

**ASTM Phase I Environmental Site Assessment  
28 North Main Street  
Waterbury, VT**



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Senior Reviewer

March 4, 2014  
Date

This ESA was prepared by Qualified Environmental Professionals (EPs) as defined in ASTM E1527-13 and EPA's AAI Final Rule. We declare that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in § 312.20 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312.

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## EXECUTIVE SUMMARY

Weston & Sampson was contracted by the Town of Waterbury to perform a Phase I Environmental Site Assessment (ESA) of a property located at 28 North Main Street and adjacent lands to the west, owned by the Town, in Waterbury, Vermont (the Site). This ESA was performed in accordance with American Society for Testing and Materials (ASTM) Standard E1527-13, and to meet EPA's All Appropriate Inquiry (AAI) requirements.

The Phase I ESA findings are as follows:

- The Site consists of two parcels, Parcel #900-0030 containing the Waterbury Village Public Library and Parcel #900-0034 is undeveloped land used as a community garden.
- The Site and adjacent properties are not listed in EPA or Vermont Department of Environmental Conservation hazardous waste site databases.
- Historic photographs indicate a barn was formerly attached to the west end of the house. Archeological shovel test pits located directly behind the library reportedly encountered deep fill deposits which contained sand and gravel, rocks, coal, coal ash, slate, macadam and brick fragments. Polycyclic aromatic hydrocarbons (PAHs) resulting from the combustion of coal are potential contaminants of concern often associated with this type of "urban fill". As such, Weston & Sampson identifies the urban fill as a Recognized Environmental Condition (REC) at the Site.
- Coal previously used to heat the Site building was observed in a pile on the floor in the basement. Some fuel oil staining was observed around the fill pipe of a 275 gallon AST. No significant staining was observed beneath the tank. These conditions are deemed de minimis and do not meet the definition of an REC.
- Historical Sanborn Maps show an auto filling station at the location presently known as 33 North Main Street. The 33 North Main Street property is not listed with VT DEC or identified on any of the databases searched and as such there is no documented release of oil and/or hazardous material at this location. Furthermore, this property is located at a lower elevation and hydrologically downgradient of the Site. This historic use is not deemed to be an REC.
- Bourne's Energy Inc., which includes an office and garage bays presumably for servicing fuel trucks is located approximately 450', southeast of the Site at 17 North Main Street. This property is not identified on any of the databases searched and as such there is no documented release of oil and/or hazardous material at this location. This property is not deemed to be an REC.
- Asbestos containing building materials and lead-based paint were confirmed in samples collected from the existing building by Clay Point Associates Inc. (CPAI). Radon gas was detected at levels exceeding the EPA action levels in 3 of the 4 samples collected at the Site.

Based on the findings of our assessment, Weston & Sampson makes the following recommendations:

- 1) The extent of "urban fill" should be delineated and environmental sampling and analysis should be performed to assess the presence of PAHs in soils and/or groundwater at the Site.

- 2) To reduce the risk of a fuel oil release, the AST piping should be repaired or replaced.
- 3) Prior to renovation/demolition, the services of a certified asbestos and lead abatement contractor should be retained to provide a scope of work and cost estimate to remove and properly dispose of ACBMs and regulated wastes associated with the building renovation.
- 4) The services of a professional contractor should be retained to implement strategies to reduce radon levels.
- 5) For good housekeeping, the coal should be removed from the basement and disposed/used properly.

## 1.0 INTRODUCTION

Weston & Sampson, on behalf of the Town of Waterbury (the Town) has prepared this Phase I Environmental Site Assessment (ESA) Report for a 0.5 acre property located at 28 North Main Street and an adjacent 1.5 acres of a 22 acre parcel located at 34 North Main Street, in Waterbury, Vermont (the Site; the Target Property). The Site contains the Waterbury Village Public Library and Historical Museum and a community garden. (Figure 2)

Weston & Sampson was requested by the Town to complete an ASTM Phase I ESA of the Site. The Town has been granted a Vermont Community Development Program Grant #07110-DR-2012-Waterbury-00013 to assist with planning and designing a Municipal Complex. The project is partially funded by the U.S. Department of Housing and Urban Development (HUD) through a Community Development Block Grant (CDBG). This Phase I ESA work is required by 24 CFR Part 58.5 (i)(2)(iii) in order to maintain eligibility for federal project funding.

The ESA was performed in accordance with the Standard Practice E 1527-13, developed by the American Society for Testing and Materials (ASTM) and EPA's All Appropriate Inquiry (AAI) standard. The ESA included an environmental database search; review of local, state, and federal regulatory agency files; and a limited reconnaissance of the Site and vicinity for potential off-Site contamination sources.

In addition, Clay Point Associates, Inc., (CPAI) of Williston Vermont was retained to sample suspected lead-based paint asbestos containing building materials and an evaluation of radon gas. The work associated with lead-based paint, asbestos and radon gas is included here to assist in planning for building renovations.

This report is subject to the Limitations described in Section 11.0.

### 1.1. Purpose

The Phase I ESA was performed to assess the Site with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and petroleum products. This practice is intended to permit the Town to satisfy some of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability: that is, the practices that constitute "all appropriate inquiry into the previous ownership and uses of the Site consistent with good commercial or customary practice" as defined in 42 U.S.C. § 9601(35)(B).

The objective of the Phase I ESA is to identify recognized environmental conditions in connection with the property at the time of the property evaluation. The term "recognized environmental condition" (REC) referenced in the E1527-13, refers to "the presence or likely presence of any hazardous substance or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." The ASTM definition does not include, "de minimis" conditions, which generally do not present a threat to human health or the environment and would not be the subject of an enforcement action if brought to the attention of the appropriate governmental agencies; therefore, de minimis conditions are not considered RECs.

This ESA was conducted utilizing a standard of good commercial and customary practice that is consistent with E 1527-13. Any significant scope-of-work additions, deletions or deviations to

E 1527-13 are noted below or in the corresponding sections of this report. The scope of work for this ESA included an evaluation of the following:

- Physical characteristics of the Site through a review of referenced sources for topographic, geologic, soil, and hydrologic data;
- Site history through a review of referenced sources such as land deeds, fire insurance maps, city directories, aerial photographs, prior reports, and interviews;
- Current Site conditions, including a site reconnaissance to observe conditions exposed at the ground surface for evidence of previous and current property usage, and indications of environmental impacts (e.g., stressed vegetation, staining, etc.), as well as interviews regarding: the presence or absence of hazardous substances or petroleum products; generation, treatment, storage, or disposal of hazardous, regulated, or biomedical waste; equipment that utilizes oils which potentially contain PCBs; and storage tanks (aboveground and underground);
- Usage of surrounding area properties and the likelihood for releases of hazardous substances and petroleum products (if known and/or suspected) to migrate onto the Site;
- Information in referenced environmental agency databases and local environmental records for sites located within specified minimum search distances;
- Past ownership through a review of available prior reports and local municipal files.

The scope of work included work associated with lead-based paint, asbestos and radon testing conducted by CPAI. CPAI parts are included to assist in planning for the building renovation.

## 1.2. Summary of Previous Investigations

Hagen Archeological Associates, Inc. (HAA, Inc.) was retained by the Town of Waterbury to conduct a Phase I Archeological Investigation for the proposed expansion of the Town Library and development of 1.5 acres for the new municipal complex. Liz Pritchett conducted a site feasibility study of the Waterbury Library in order to provide Historic Preservation recommendations for the redevelopment. Weston & Sampson reviewed these reports, dated January 2014 and October 2013, respectively, for relevant Site information. Copies of the reports are included as **Appendix A**.

The Library is located in the historic former home of Civil War surgeon Dr. Henry Janes. The house was constructed in 1890 and was bequeathed to the Town of Waterbury by Dr. Henry Janes after his death in 1915. Historic photographs (Pritchett, 2013) indicate a barn was formerly attached to the west end of the house. Archeological shovel test pits located directly behind the library reportedly encountered deep fill deposits which contained sand and gravel, rocks, coal, coal ash, slate, macadam and brick fragments. The shovel test pits were located in the previous location of the dairy barn and the fill was most likely associated with the infilling of the barn foundation and/or landscaping with nearby machinery after the structure was removed from the site sometime in the mid to late 20<sup>th</sup> century (Hartgen, 2014).

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## 2.0 SITE DESCRIPTION

### 2.1. Site Ownership and Location

#### 28 North Main Street - Library

Latitude/Longitude:	44° 20' 23.28" North 72° 45' 30.96" West
UTM Coordinates:	Zone 18 678,679.8 meters Easting 4,911,841.5 meters Northing
Site Owner:	Town of Waterbury
Site Occupants:	Public Library
Site Location:	28 North Main Street, Waterbury, Vermont
County:	Washington
Parcel ID:	900-0030V
Size:	0.5 acres

#### 34 North Main Street- Community Garden

Site Owner:	Town of Waterbury
Site Occupants:	Vacant/Community Garden
Site Location:	34 North Main Street
County:	Washington
Parcel ID:	900-0034V
Size:	1.5 acres

The Site consists of two parcels, Parcel #900-0030 containing the Waterbury Village Public Library and Parcel #900-0034 which is undeveloped land used as a community garden. The Site is located in the Waterbury Village Historic District, US Route 2 (North Main Street).

A Locus Map and Aerial Map of the Site and general surroundings are provided as **Figures 1 and 2**. A Site Plan is provided as **Figure 3**. Site photographs are included in **Appendix B**.

### 2.2. Current Use of the Property

The Site contains the Waterbury Public Library and Historical Museum. Undeveloped land to the west of the library parcel is used for a community garden.

### 2.3. Description of Structures, Roads, Other Improvements on the Site

The Library is 2-1/2 stories with a full basement. Distinct architectural features of the historic building include asymmetrical massing and a complex roof line.

The Site is accessible from the east via a curb cut and paved parking area serving the Library off North Main Street. A gravel drive borders the north property line and provides access to the community garden behind the Library. A row of trees separates the Site from the residential properties to the south.

#### **2.4. Current Uses of Adjoining Properties**

North Main Street delineates the Site to the east. Located opposite the Site on North Main Street are single and multifamily residential properties and commercial offices. The remaining lands of Parcel 900-0034 border the Site to the north and west and contain recreational ball fields beyond which flows the Winooski River. Residential properties and commercial office spaces align the Site to the south.

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### 3.0 USER PROVIDED INFORMATION

A User Questionnaire was forwarded to Mr. Stephen Lotspeich, Community Planner, Town of Waterbury. The information requested in the User Questionnaire is intended to assist in gathering evidence to identify RECs at the Site. A copy of the completed User Questionnaire and AAI Checklist are included as **Appendix C**. The following is a summary of the completed User Questionnaire.

#### 3.1. Environmental Liens

Mr. Stephen Lotspeich is not aware of any environmental cleanup liens against the Site that are filed or recorded under federal, tribal, state, or local law.

#### 3.2. Activity and Use Limitations

Mr. Stephen Lotspeich is not aware of any Activity and Use Limitation (AUL) implemented at the Site.

#### 3.3. Specialized Knowledge

Mr. Stephen Lotspeich is an employee of the Town and has thorough experience with the Site for the past 20 years. He reported no knowledge of RECs, historical recognized environmental conditions (HRECs), or other potential environmental concerns in connection with the Site or nearby properties.

#### 3.4. Commonly Known or Reasonable Ascertainable Information

Mr. Stephen Lotspeich did not report any commonly known or reasonably ascertainable information about the Site that would be indicative of releases or threatened releases.

#### 3.5. Valuation Reduction for Environmental Issues

No property valuation reduction related to environmental issues or concerns was reported by Mr. Stephen Lotspeich. The Site is not being purchased.

#### 3.6. Degree of Obviousness of Contamination

Mr. Stephen Lotspeich reported no obvious indicators that point to the presence or likely presence of contamination at the Site.

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## 4.0 DATABASE SEARCH REPORT AND PUBLIC RECORDS

### 4.1. Electronic Database Search

A review of standard environmental databases maintained by federal, state, and tribal offices was completed through Environmental Data Resources, Inc. (EDR) of Milford, Connecticut. The databases were searched for properties with reported environmental conditions located within approximate minimum search distances as specified by ASTM Standard E 1527-13. The databases use geocoded information to identify the coordinates of the properties in the databases or to check the street addresses of practically reviewable non-geocoded “orphan” properties located within the same zip code. The detailed database report and limitations of the search criteria are contained in **Appendix D**, which also defines database acronyms that are not explicitly defined in this discussion.

The database report identified 18 “orphan sites.” Orphan sites are those sites that could not be accurately mapped or geocoded due to inadequate location information. Weston & Sampson attempted to locate these sites via vehicular reconnaissance and interviews with personnel familiar with the area. Based on this research, Weston & Sampson did not identify any listed orphan sites that are likely to have impacted conditions at the Site.

It should be noted that plotted locations of listed sites are not always accurate. With regard to listings that are determined or suspected to be inaccurate, based on information from other sources such as direct observation or consultation with individuals familiar with the property, Weston & Sampson uses the best available data when evaluating the location of listed sites discussed below.

The following table provides a summary of findings of EDR’s report. Only databases reporting sites within the search radius are presented. The Target Property was not listed on any of the databases searched by EDR. Specific properties identified within the database report are further discussed below.

SUMMARY OF EDR’S REGULATORY DATABASE SEARCH FINDINGS			
Regulatory Database	Approximate Minimum Search Distance	Target Property Listed	Off-site Listings Within Search Distance
Federal RCRA Generator Sites	0.25 mile	No	4
State and Tribal equivalent CERCLIS Sites	1.0 mile	No	3
State and Tribal Leaking Storage Tank Sites	0.5 mile	No	8
State and Tribal Registered Storage Tank Sites	0.25 mile	No	13
RCRA Non-Generator NLR	0.25 mile	No	2
RGA LUST	0.5 mile	No	6
RGA HWS	1.0 mile	No	4
VT, NH, NJ manifests	0.25 mile	No	6

The discussion in the following sections serves to highlight findings of the database search that may have the potential to present RECs at the Site. Specific properties identified in the above regulatory databases may tend to pose a risk to the Site based on characteristics such as proximity, elevation, type of contaminant and regulatory status. Whether or not a REC

associated with an off-site source has the potential to impact the Site depends on the distance of the source from the Site, its direction from the Site relative to the flow of groundwater, the magnitude of the release, contaminant type, and location. In general, off-site RECs with sources that are proximate to, and hydraulically upgradient of the Site have the potential to impact the Target Property. The presumed direction of groundwater flow at the Site is to the northwest.

#### 4.1.1. Federal Agency Database Listings

##### National Priority List (NPL)

The NPL database, also known as the Superfund List, is a subset of CERCLIS and identifies sites that are ranked as high priority for remedial action under the Federal Superfund Act. Neither the Target Property nor any properties located within a 1.0-mile radius of the Target Property are identified on the NPL.

##### Delisted National Priority List (NPL)

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425(e), sites may be deleted from the NPL where no further response is appropriate. Neither the Target Property nor any properties located within a 1.0-mile radius of the Target Property are identified on the Delisted NPL database.

##### Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)

CERCLIS contains data regarding potentially hazardous waste sites that have been reported to the EPA by states, municipalities, private companies, and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites that are included on the National Priority List (NPL), as well as sites which are in the screening and assessment phase for possible inclusion on the NPL. Neither the Target Property nor any properties located within a 0.5-mile radius of the Target Property are identified on the CERCLIS database.

##### CERCLIS – No Further Remedial Action Planned (CERCLIS-NFRAP)

As of February 1995, CERCLIS sites designated as No Further Remedial Action Planned (NFRAP) have been removed from the CERCLIS list. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed without the need for the site to be placed on the NPL, or the contamination was not considered sufficient to warrant Federal Superfund action or NPL consideration. Neither the Target Property nor any properties located within a 0.5-mile radius of the Target Property were identified on the CERCLIS-NFRAP database.

##### Resource Conservation and Recovery Act (RCRA) – Corrective Action Tracking System (CORRACTS)

RCRAInfo is EPA's comprehensive information system that provides access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information regarding sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. The RCRA-CORRACTS database identifies treatment, storage, and/or disposal (TSD) facilities that have conducted, or are currently conducting, corrective action(s) as regulated under RCRA. Neither the Target Property nor any properties located within a 1.0-mile radius of the Target Property are identified on the RCRA-CORRACTS database.

### RCRA non-CORRACTS Treatment, Storage and/or Disposal Facilities

RCRA non-CORRACTS TSD facilities are required to register hazardous waste activity under the Resource Conservation and Recovery Act. Neither the Target Property nor any properties located within a 0.5-mile radius of the Target Property are identified on the RCRA non-CORRACTS TSD database.

### RCRA Hazardous Waste Generators

Hazardous waste generators tracked under RCRA are classified as either Large Quantity Generators (LQGs), Small Quantity Generators (SQGs), or Conditionally Exempt Small Quantity Generators (CESQG). A RCRA-LQG is defined as a facility that generates over 1,000 kilograms (Kg) of hazardous waste, or over 1 Kg of acutely hazardous waste per month. A RCRA-SQG is defined as a facility that generates between 100 Kg and 1,000 Kg of hazardous waste per month. A RCRA-CESQG is defined as a facility that generates less than 100 Kg of hazardous waste, or less than 1 Kg of acutely hazardous waste per month. The EDR database report identified three (3) properties located within a 0.25-mile radius of the Target Property on the RCRA Generators database. Information regarding the RCRA Generator sites is presented in the following table.

<b>RCRA Generators</b>			
<b>Site</b>	<b>Distance / Direction / Gradient*</b>	<b>EPA ID</b>	<b>Regulatory Status</b>
Edward Novogroski DD	0.109 mile / North-northwest / Crossgradient	1006817911	Class: CESQG Waste code(s): D011 Violations: No violations reported
Champlain Oil Quinland Farms Cross Roads 52 North Main Street Waterbury, VT	0.161 mile / North-northwest / Downgradient	1004792805	Class: CESQG Waste code(s): D001 and D018 Violation Status: No Violations reported
Wesco Inc Champlain Farms 1 North Main Street Waterbury, VT	0.163 mile / Southeast / Crossgradient	1004792643	Class: CESQG Waste code(s): D001 and D018 Violations: Not Report/General Violation Dates: 10/9/1997, 4/17/1998, 6/5/1998 & 10/11/2000 Compliance Dates: Not Reported

\* Presumed hydrogeologic gradient based upon regional topography and inferred groundwater flow direction

Weston & Sampson is of the opinion that the RCRA Generator site identified in the EDR report and summarized in the table above is not likely to pose a threat to the subsurface conditions of the Site based upon the generator class, distance/gradient relative to the Site, and violation status.

### RCRA Non-Generators

Tracked under the RCRAInfo database, RCRA Non-Generator sites are those sites no longer generating hazardous waste as defined by RCRA. One property located within a 1.0-mile radius of the Target Property was identified on the RCRA Non-Generators database. Information regarding the property is presented below.

RCRA Non-Generators			
Site	Distance / Direction / Gradient*	EPA ID	Regulatory Status
VT Army National Guard Waterbury Armory 86 Armory Drive Waterbury, VT	0.148 mile / Northeast/ Crossgradient	1010337434	Violation Status: No Violations reported

\* Presumed hydrogeologic gradient based upon regional topography and inferred groundwater flow direction

Weston & Sampson is of the opinion that the RCRA Non-Generator site identified in the EDR report and summarized in the table above is not likely to pose a threat to the subsurface conditions of the Site based upon the generator class, distance/gradient relative to the Site, and violation status.

#### Federal Engineering Control / Institutional Control Registries

The completion of site cleanup activities may include the implementation of engineering controls or institutional controls as part of the response action. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to eliminate the exposure pathway of regulated substances. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls. Neither the Target Property nor any sites located within a 0.5-mile radius of the Target Property are identified on Federal Engineering Control or Institutional Control Registries.

#### Emergency Response Notification System (ERNS)

Emergency Response Notification System (ERNS) is a national database used to collect information regarding reported releases of petroleum products and/or hazardous substances. The database contains information from spill reports submitted to federal agencies, including the EPA, the U.S. Coast Guard, the National Response Center, and the U.S. Department of Transportation. A review of this database was conducted in order to determine whether any spills or incidents involving releases of hazardous substances or petroleum products have occurred at the Site. The Target Property is not identified on the ERNS database.

#### 4.1.2. State and Tribal Agency Database Records

##### State and tribal equivalent NPL and CERCLIS databases

State and tribal equivalent CERCLIS databases were searched for sites located within a 1.0-mile radius of the Target Property. The EDR report identified three (3) state/tribal equivalent CERCLIS sites located within a 1.0-mile radius of the Target Property. However, all three state/tribal equivalent CERCLIS sites are located more than 1,000 feet from the Site and are not likely to pose a threat to the subsurface conditions of the Site based upon the release conditions, distance/gradient relative to the Site and/or closed regulatory status.

##### State and Tribal Spills Sites (SPILLS)

A review of available Release/Spills (SPILLS) database was conducted in order to determine whether any spills or incidents involving releases of hazardous substances or petroleum products have occurred at the Target Property. The Target Property was not identified on the SPILLS database.



### State and Tribal Landfill Sites and Solid Waste Disposal Sites

The state and tribal landfill and solid waste disposal site databases identify active or inactive landfill and transfer station facilities, as well as open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites. Neither the Target Property nor any properties located within a 0.5-mile radius of the Target Property are identified on state or tribal landfill and solid waste disposal site databases.

### State and Tribal Leaking Storage Tank (LST) Sites

Leaking Storage Tank Sites are properties where releases of hazardous substances or petroleum products from underground storage tanks (USTs) and/or aboveground storage tanks (ASTs) have been identified and reported to state, tribal, or local agencies. The EDR Report identified seven (7) LST sites located within a 0.5-mile radius of the Target Property. Of the listed LST sites, four (4) are located more than 1,000 feet from the Target Property and are not likely to pose a threat to subsurface conditions of the Target Property based upon the release conditions, distance/gradient relative to the Site, and/or closed regulatory status. Information regarding the three (3) LST listings located within 1,000 feet of the Target Property is presented in the following table.

<b>STATE AND TRIBAL LEAKING STORAGE TANK SITES</b>			
<b>Site</b>	<b>Distance / Direction / Gradient*</b>	<b>Facility ID</b>	<b>Regulatory Status</b>
Waterbury Gulf 1 North Main Street Waterbury, VT	0.163 mile / Southeast / Crossgradient	972214	Notification Date: Not Reported Source: Gasoline UST Media Impacted: Not reported Status: Not Reported Record Last Update: 6/19/2013 Project Status: Trying to determine if monitoring well maintenance plan was established
Champlain Oil Quinland Farms Cross Roads 52 North Main Street Waterbury, VT	0.161 mile / North-northwest / Downgradient	20083796	Notification Date: Not Reported Source: Gasoline UST Media Impacted: Soil/groundwater Status: Not Reported Record Last Update: 5/8/2012 Project Status: UST upgrade, soil contamination found, 6/2009 ISI showed minimal GW contamination. 9/2011 confirmatory sample ND.
Valley Rent All 53 North Main Street Waterbury, VT	0.177 mile / North-northwest / Downgradient	20023022	Notification Date: Not Reported Source: Gasoline UST/ #2 Fuel Oil Media Impacted: Not Reported Status: Voluntary Action Record Last Update: 6/21/2010 Project Status: UST removed. Contamination found. Investigation complete. No impact to GW. SMAC after floor drain closure. Closure confirmation received 5/20/2010.

\* Presumed hydrogeologic gradient based upon regional topography and inferred groundwater flow direction

Weston & Sampson is of the opinion that the three LST sites identified in the EDR report and summarized in the table above are not likely to pose a threat to the subsurface conditions of the



Target Property based upon the distance from the Target Property, gradient relative to the Target Property, and the nature and extent of the release.

#### State and Tribal Registered Storage Tanks

The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of RCRA. The data is generated from the Vermont Department of Conservation Underground Storage Tank database. The EDR Report identified thirteen UST sites located within a 0.25-mile radius of the Target Property. Of the 13 USTs six (6) are located more than 1,000 feet from the Target Property and are not likely to pose a threat to subsurface conditions of the Target Property based upon the distance/gradient relative to the Site, and/or closed regulatory status. Information regarding the seven (7) UST listings located within 1,000 feet of the Target Property is presented in the following table.

<b>STATE AND TRIBAL REGISTERED STORAGE TANK SITES</b>			
<b>Site</b>	<b>Distance / Direction / Gradient*</b>	<b>Facility/UST ID</b>	<b>Regulatory Status</b>
Bell Property 11 North Main Street Waterbury, VT	0.100 mile / Southeast / Crossgradient	5550955	No Tanks Installed: 1 No Tanks Removed: 1 Contents: Gasoline Capacity: 1,000- gallon Date Removed: 2007
Apartment Building 13-13 ½ Main Street Waterbury, VT	0.165 mile / Southeast / Crossgradient	3036	No Tanks Installed: 1 No Tanks Removed: 0 Contents: Fuel Oil Capacity: 1,000-gallon Status/Ins Date: ACTIVE
Luce Block 17-19 Stowe Street Waterbury, VT	0.167 mile / Southeast/ Crossgradient	2152	No Tanks Installed: 1 No Tanks Removed: 0 Contents: Fuel Oil Capacity: 2,000-gallon Status/Ins Date: ACTIVE
VT Army National Guard Waterbury Armory 86 Armory Drive Waterbury, VT	0.148 mile / Northeast/ Crossgradient	736 9244 9245	No Tanks Installed: 3 No Tanks Removed: 1 (9244) Contents: Fuel Oil Capacity: 6,000-gallon UST (9244) removed 1989, 6,000-gallon UST (9245): Active, UST (736): Not Reported Status/Ins Date: 2 ACTIVE
Waterbury Post Office 47-1/2 North Main Street Waterbury, VT	0.150 mile / North-northwest / Downgradient	9999827	No Tanks Installed: 1 No Tanks Removed: 1 Contents: Fuel Oil Capacity: 2,000- gallon Date Removed: 1996

STATE AND TRIBAL REGISTERED STORAGE TANK SITES			
Site	Distance / Direction / Gradient*	Facility/UST ID	Regulatory Status
Crossroads Beverage 52 North Main Street Waterbury, VT	0.161 mile / North-northwest / Downgradient	1575 11194 11195 11196 11197 11198 16035 16036	No Tanks Installed: 8 No Tanks Removed: 5 (11194,11195,11196,11197,11198) ACTIVE USTs: (1575,16035, 16036) Removed UST Contents: (3) Gasoline, (1)Diesel, (1) Kerosene Capacity: 2,000- gallon Date Removed: All USTs 2008 Active UST Contents: (2) Gasoline, (1) Diesel
Valley Rent All 53 North Main Street Waterbury, VT	0.177 mile / North-northwest / Downgradient	6369 6370 6371	No Tanks Installed: 3 No Tanks Removed: 3 Removed UST Contents: (2) Gasoline (1) Fuel Oil Date Removed: (2) 1990 (1) 2002

\* Presumed hydrogeologic gradient based upon regional topography and inferred groundwater flow direction

Weston & Sampson is of the opinion that the seven (7) registered storage tank sites listed in the above table and identified in by EDR are not likely to pose a threat to the subsurface conditions of the Site based upon the distance/gradient relative to the Target Property, UST status and and the tank inspection status.

#### State and Tribal Engineering Control / Institutional Control Registries

The completion of disposal site cleanup activities may include the implementation of engineering controls or institutional controls as part of the response action. Engineering controls include various forms of caps, building foundations, liners, and treatment methods for the pathway elimination of regulated substances. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls. Neither the Target Property nor any property located within a 0.5-mile radius of the Target Property were identified in the state engineering/institutional control registry.

#### State and Tribal Voluntary Cleanup Sites

Neither the Target Property nor any properties located within a 0.5-mile radius of the Site are identified on state or tribal voluntary cleanup site databases.

#### State and Tribal Brownfields Sites (BROWNFIELDS)

Neither the Target Property nor any properties located within a 0.5-mile radius of the Site are identified on the BROWNFIELDS database.

#### 4.1.3. Additional Environmental Records

##### Local Brownfields Lists

The US BROWNFIELDS list is EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs. The EDR report identified eight local Brownfields sites located within a 0.5-mile radius of the Target

Property. All of the listed properties are located more than 0.25 miles from the Target Property and are not likely to pose a threat to the Site based upon the release conditions, distance/gradient relative to the Site, and/or closed regulatory status.

Records of Emergency Release Reports

The Release Tracking Database (RELEASE) logs emergency releases as they are reported to State agencies. Target Property was not identified on the RELEASE database.

RCRA Non-Generator NLR

RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste. The EDR report identified two (2) RCRA Non-Generator NLR sites located within a 0.25-mile radius of the Target Property. Information regarding the site is presented in the following table.

<b>RCRA NON-GENERATOR NLR</b>			
<b>Site</b>	<b>Distance / Direction / Gradient*</b>	<b>Registry ID</b>	<b>Regulatory Status</b>
Nynex Central Office Swasey Court Waterbury, VT	0.152 mile / Southeast / Upgradient	1000112429	Class: RCRA Non-Gen NLR Waste code(s): D002 Violation Status: No violations found Non Generators do not presently generate hazardous wastes
Waterbury Armory 86 Armory Drive Waterbury, VT	0.148 mile / Northeast / Crossgradient	1010337434	Class: RCRA Non-Gen NLR Waste code(s): Lead Violation Status: No violations found Non Generators do not presently generate hazardous wastes

\* Presumed hydrogeologic gradient based upon regional topography and inferred groundwater flow direction

Weston & Sampson is of the opinion that the RCRA Non-Generator NLR site, identified in the EDR report and summarized in the table above, are not likely to pose a threat to the subsurface conditions of the Site based upon the generator status and distance/gradient relative to the Site.

Manifests (VT, NJ, NY)

Manifests are tracking records utilized when slipping hazardous wastes for disposal. A total of 6 locations within 0.25 miles report manifests. Two locations are at a distance to not likely pose a threat.

MANIFESTS			
Site	Distance / Direction / Gradient*	EPA ID #	Material Description
Waterbury Armory 86 Armory Drive Waterbury, VT	0.148 mi. Northeast Crossgradient	VTP000012553 (NY) VTR0000515676 (VT)	Lead
Champlain Oil Quinland Farms Cross Roads 52 North Main Street Waterbury, VT	0.161mi. Northwest Downgradient	VTR000014308 (VT)	Flammable Liquid
Wesco Inc Champlain Farms 1 North Main Street Waterbury, VT	0.163 mi. Southeast Crossgradient	VTR000010082	Benzene

\* Presumed hydrogeologic gradient based upon regional topography and inferred groundwater flow direction

Weston & Sampson is of the opinion that the Manifest Sites, identified in the EDR report and summarized in the table above, are not likely to pose a threat to the subsurface conditions of the Site based upon the generator status and distance/gradient relative to the Site.

#### Manufactured Gas Plants (EDR MGP)

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the by-products of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination. Neither the Target Property nor any properties located within a 1.0-mile radius of the Target Property were identified in the EDR MGP site database.

#### Historical Auto Stations

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches. Neither the Target Property nor any properties located within a 0.25-mile radius of the Target Property were identified as an EDR US Hist Auto Stat site.

#### Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning

establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches. Neither the Target Property nor any properties located within a 0.25-mile radius of the Target Property were identified in the EDR US Hist Cleaners site database.

#### Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and often includes records that no longer appear in current government lists. The EDR report identified four (4) State Hazardous Waste sites located within a 1.0-mile radius of the Target Property; however, all sites identified within 1,000 feet of the Target Property are addressed previously in this report in the review of State and tribal equivalent CERCLIS databases.

#### Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and often includes records that no longer appear in current government lists. The EDR report identified six (6) Archive Leaking Underground Storage Tank sites located within a 0.5-mile radius of the Target Property; however, all sites identified within 1,000 feet of the Target Property are addressed previously in this report in the review of State and tribal LST databases.

#### 4.1.4. Adjacent Property Listings

There were no directly adjacent properties identified on the EDR regulatory databases searched.

#### 4.1.5. Sites of Concern Listings

Sites of concern include any property that could impact the subject property due to a release of hazardous substances. Typically sites with open releases and situated hydrogeologically up-gradient are considered sites of concern. To assist in making a determination if a release has a high risk of impacting the subject property, the following guidelines from ASTM E2600-10 were considered when evaluating releases:

- Petroleum hydrocarbons: 1 /10 mile or 528 feet; and
- All other releases (including chlorinated solvents): 1/3 mile or 1,760 feet

Seven (7) sites of concern were identified in the EDR Regulatory database report with the potential to impact the subject property, due to their location within a 1/3 mile Area of Concern radius from the Site. Bourne's Energy, located at 17 North Main Street, located 450' southeast and potentially upgradient was not identified on any of the databases searched but was observed during the Site inspection as performing vehicle maintenance. None of these listed sites are likely to pose a risk and do not warrant a file review, because they fall into one or more of the following categories: a petroleum spill greater than 528 feet from the Site; downgradient and/or crossgradient upgradient, but no records of release; upgradient, but contamination reduced to background; and/or subsurface migration to the Site is impeded by hydrogeologic gradient.

#### 4.1.6. Orphan Listings

The EDR database report identified 18 orphan site listings. None of the orphan listings were identified as Adjacent Properties and/or Sites of Concern. Additionally, all orphan sites are located beyond the 1/3 mile Area of Concern radius and therefore do not warrant file reviews. A copy of the regulatory database report is included in **Appendix D** of this report.

#### 4.1.7. Tier I Vapor Encroachment Screening Summary

In 2010, ASTM International issued its revised Standard E2600-10 entitled “Standard Guide for Vapor Encroachment (VE) Screening on Property Involved in Real Estate Transactions.” This standard guide has been adopted into the ASTM 1527-13 Phase I Environmental Site Assessment Standard. The purpose of the VE standard is to define good commercial and customary practice for real estate transactions in the United States for conducting a screening assessment directed solely at the likelihood for migrating vapors to encroach upon a target property (i.e. the Site) creating a vapor encroachment condition (VEC). Whether or not encroaching vapors result in a vapor intrusion problem requires further investigation that is beyond the scope of the standard.

A VEC is defined as the presence or likely presence of chemicals of concern (COC) vapors in the subsurface of the Site caused by the release of vapors from contaminated soil or groundwater on or near the Site. An area of concern (AOC) as defined in the E2600-10 is measured 0.33-miles from the Site for known or suspect contaminated sites with volatile organic compounds (VOCs) or semi-VOCs; 0.1-mile from the Site for known or suspect petroleum hydrocarbon releases. The identification of AOCs may be reduced if the groundwater flow direction is known relative to the Site. Critical distances are taken into account for contaminated groundwater plumes in any direction for COCs including petroleum LNAPL accumulating above the water table at a distance of 100 feet from the edge of the plume to the Site and 30 feet for dissolved volatile petroleum hydrocarbons.

Using the information evaluated in Sections 4.1.4 through 4.1.6 and the EDR Tier I screening report, Weston & Sampson has performed a Vapor Encroachment Screening (Tier 1) in general accordance with the scope of work and limitations of ASTM Standard Practice E 2600-10 for the Target Property. The purpose of this Vapor Encroachment Screening (Tier 1) was to identify existing or potential VECs (as defined by ASTM Standard E 2600-10) affecting the subject property. As part of the screening, Weston & Sampson completed the Questionnaire that can be found in Section X3 of ASTM E 2600-10, which is duplicated in the table below:

#### *VEC Tier 1 Screening*

<b>Question</b>	<b>Response</b>	<b>Comments</b>
1. Property Type?	Commercial	
2. Are there buildings/structures on the property?	Yes	The Site is currently used as the Waterbury Public Library
3. Will buildings/structures be constructed on the property in the future?	Yes	Weston & Sampson assumes that redevelopment will include buildings.
4. If buildings exist or are proposed, do/will they have elevators?	Yes	Weston & Sampson assumes that buildings will be multi-floor, and include elevators.



Question	Response	Comments
5. Type of level below grade (existing or proposed)?	Unfinished	
6. Ventilation in level below grade?	Limited windows	
7. Sump pumps, floor drains, or trenches (existing or proposed)?	None observed	The area around the fuel burning furnace is a sunken poured concrete containment area.
8. Radon or methane mitigation system installed?	No	
9. Heating system type (existing or proposed)?	Oil burning furnace	Previously coal burning furnace
10. Type of fuel energy (existing or proposed)?	Fuel oil	
11. Have there ever been any environmental problems at the property?	No	
12. Does/will a gas station or dry cleaner operate anywhere on the property?	No	
13. Do any tenants use hazardous chemicals in relatively large quantities on the property?	No	
14. Have any tenants ever complained about odors in the building or experienced health-related problems that may have been associated with the building?	No	
15. Are the operations (or proposed operations to be performed) on the property OSHA regulated?	No	
16. Are there any existing or proposed underground storage tanks (USTs) or above ground storage tanks (ASTs)?	Yes	There is a 275-gallon AST in the basement
17. Are there any sensitive receptors (for example, children, elderly, people in poor health, and so forth) that occupy or will occupy the property?	Yes	The Site is currently used as The Waterbury Public Library

*Additional VEC Criteria*

<b>Question</b>	<b>Response</b>	<b>Comments</b>
1. Is the property known to have current or past contamination?	No	
2. Is contamination of the property suspected?	No	Some fuel oil around the AST observed. No significant staining observed beneath the AST.
3. Is an adjacent property known to have current or past contamination which may have impacted the subject property?	No	
4. Is a nearby property known to have current or past contamination which may have impacted the subject property?	No	
5. Is regional groundwater contamination known to exist beneath the property?	No	
6. Are you aware of other conditions which may result in vapor intrusion at the property?	No	

As detailed in Section 4.1.5, Seven (7) sites of concern were identified in the EDR Regulatory database report and one additional site was observed with the potential to impact the Target Property due to their location within the 1/3 mile AOC radius from the Site. None of the sites of concern are likely to pose a risk and do not warrant a file review, because they fall into one or more of the following categories: a petroleum spill upgradient, but greater than 528 feet from the Site; upgradient, but no records of release; upgradient, but contamination reduced to background; and/or subsurface migration to the Site is impeded hydrogeologic gradient.

#### **4.2. Municipal Records**

Weston & Sampson conducted a file review at the Town municipal offices on February 14, 2014. Pertinent information obtained from the Town is included in **Appendix E** and discussed below.

##### 4.2.1. Town of Waterbury Clerk and Assessor's Records

Weston & Sampson performed a file review at the Waterbury town office. The 0.5 acre portion of the Site containing the Waterbury Library at 28 North Main Street is identified on Tax Map #19 as Parcel #242 and Property ID 900-0030V. The property card identifies the owner as the Town of Waterbury. The 1.5 acre portion of the Site is identified as part of a 22 acre parcel described as "Rowe Rec Field", identified by the Town on Tax Map #19 as Parcel #238 and Property ID 900-0034V. The property card identifies the owner as the Town of Waterbury.

Copies of the property cards, inspection records for 2001, 2008 and 2009 and the current deeds are included for reference in **Appendix E**. According to the Waterbury Town Clerk, Carla Lawrence, there are no liens against the property.



#### 4.2.2. Town of Waterbury Zoning and Planning Department

Weston & Sampson performed a file review through the Town regarding Planning and Zoning permits pertaining to the Site. A zoning permit was issued to the rotary Club of Waterbury for a “Banner-Holding Structure” at 28 North Main Street. A copy of the permit is included for reference in **Appendix E**.

Mr. Steve Lotspeich, Community Planner, provided a Legal Boundary Map for “Dascomb Rowe Field” incorporated into the Site Plan basemap provided as Figure 3. The Map depicts the 1.5 acres to be converted for the development of the municipal offices. Mr. Lotspeich has been with the Town of Waterbury for 20 years and completed the User Questionnaire and Transaction Screen Questionnaire for the Site. Mr. Lotspeich recalled that the 275-gallon fuel tank in the basement of the library did not tip over during the flooding from Hurricane Irene in 2011, a storm which resulted in significant impacts to the Town. Mr. Lotspeich was not aware of any other incidents involving the use, storage or release of hazardous materials at the Site or adjoining properties.

#### 4.2.3. Town of Waterbury Volunteer Fire Department

Weston & Sampson corresponded with Fire Chief Gary Dillon via email. Chief Dillon had no knowledge of USTs at the Site or adjoining properties, no knowledge of hazardous materials storage, releases or incidents at the Site or adjacent properties. He has not responded to any incidents at the Site except for what appeared to be false alarms. Chief Dillon has been with the Town Fire Department for 33 years. A copy of the email received by Weston & Sampson in response to our inquiry is included in **Appendix E**.

#### 4.2.4. Town of Waterbury Department of Public Works

Weston & Sampson spoke with Mr. Alec Tuscany, P.E., Public Works Director for the Town. Mr. Tuscany was not aware of any incidents involving the use, storage or release of hazardous materials at the Site or adjoining properties. He did recall a repair to the sewer service but nothing related to hazardous materials. Mr. Tuscany indicated municipal sewer was extended to the area when the first wastewater treatment plant was constructed in Waterbury in the 1960s.

### **4.3. State Records – Vermont Natural Resources Atlas Database**

Weston & Sampson performed an online review of the Vermont Natural Resources Atlas. The Atlas provides geographic information about environmental features and sites that the Vermont Agency of Natural Resources manages, monitors, permits, or regulates. In addition to standard map navigation tools, this site allows you to link from sites to documents where available, generate reports, export search results, import data, search, measure, mark-up, query map features, and print PDF maps. No additional Sites of Concern were identified through the Atlas that weren’t already described above. No further research was performed.

### **4.4. Site and Area History**

#### 4.4.1. Sanborn Maps

A search for historical Sanborn fire insurance maps depicting the Site and vicinity was conducted by EDR, Inc. EDR identified Sanborn maps for the Site area dated 1889, 1894, 1899,

1904, 1909, 1919, 1926, 1948 and 1962. The existence of a filling station diagonally across North Main Street from the Site in 1948 and 1962 is the only issue noted. However, this location is hydrologically down/cross gradient of the Site and a release of hazardous substances or oil would not likely impact the Site. Mr. Tuscany and Fire Chief Dillon were questioned about the former filling station. Neither of them had any knowledge of the property's use as a filling station. The EDR Sanborn Map Report is included as **Appendix F** and summarized in the following table.

SANBORN MAP SUMMARY		
Year	Issues Noted	Observations
1889 1894 1899 1904 1909	None	<p><b>Site Property:</b> The Site is developed with a rectangular shaped dwelling. The southern portion of the building appears to be a 2-story stable or garage.</p> <p><b>Surrounding Properties:</b> The area immediately surrounding the Site is developed with mostly dwellings. A building exists on the adjacent property to the north which is initially labeled as "vacant" or "empty barn", later (1904 and 1909) labeled as "farm".</p>
1919 1926 1948 1962	None	<p><b>Site Property:</b> The rectangular shaped building on the Site is labeled "Waterbury Public Library".</p> <p><b>Surrounding Properties:</b> The area immediately surrounding the Site is developed with mostly dwellings. In 1948 and 1962 a "filling station" at 33 North Main Street, diagonally across from the Site. Two tanks are identified on the north side of that property approximately 120' from the Site.</p>

#### 4.4.2. Topographic Maps

Historical topographic maps provide information related to physical land configuration such as elevation, ground slope, surface water and other features. While most buildings in densely developed urban centers are not depicted, topographic maps typically show structures equal to or larger than the size of a single-family residence in rural areas. Other notable features such as woods, pipelines, municipal boundaries, and areas of filled land are often marked on topographic maps.

A search for historical topographic maps depicting the Site and vicinity was conducted by EDR. The Site can be identified in three EDR-supplied topographic maps dated 1924, 1948, and 1980. All three historical topographic maps show a similar topography surrounding the Site. The Site appears to be on the edge of a terrace overlooking a low lying flat area extending to the Winooski River. The Winooski River dominates topography and drainage to the west and approximately 1,000 feet from the Site. The topography to the north, south and west of the Winooski River appears to be relatively steep highlands. Each of the maps reviewed indicate that the Site and surrounding area are developed. The EDR Historical Topographic Map Report is included as **Appendix G**.

#### 4.4.3. Aerial Photographs

Historical aerial photographs may be used to evaluate changes in land use and to identify visible areas of potential environmental concern. A search for historical aerial photographs depicting the Site and vicinity was conducted by EDR. The EDR Aerial Photo Decade Package for the Site included ten (10) photographs dated 1972, 1976, 1985, 1992, 1996, 2006, 2008, 2009, 2011, and 2012. All ten historical area photographs indicate that the Site and surrounding area is developed. Baseball fields are shown on the property to the north and west of the Site in the 1985-2012 historical aerial photographs. The EDR Aerial Photo Decade Package is included as **Appendix H**.

4.4.4. City Directories

Historical street directories are commercial publications containing names and addresses, and in many cases, occupations of the occupants of a particular community. The directories may also contain information pertaining to business processes conducted within a community. A search for historical street directories was conducted by EDR. The EDR City Directory Abstract is included as **Appendix I**.

CITY DIRECTORIES SUMMARY		
Year	Issues Noted	Notable Occupants
1999	No	<b>Site Property:</b> Not listed
		<b>Surrounding Properties:</b> The majority of the properties surrounding the Site on North Main Street and Winooski Street appear to be residential.
2003	No	<b>Site Property:</b> Occupant unknown
		<b>Surrounding Properties:</b> The majority of the properties surrounding the Site on North Main Street and Winooski Street appear to be residential with the following exceptions: 38 North Main Street – Novogroski Edward DDS PC 47 North Main Street – Salon Performance 58 North Main Street – Delphia Construction
2008	No	<b>Site Property:</b> Not listed
		<b>Surrounding Properties:</b> The majority of the properties surrounding the Site on North Main Street and Winooski Street appear to be residential with the following exceptions: 27 North Main Street – RAD Construction 11 Winooski Street – Iten Co Inc. 12 Winooski Street – Liz Schlegel Marketing Consultant 13 Winooski Street - Craig Van Tuinen MD Inc. 19 Winooski Street – Oneill Towne Family LLC
2013	No	<b>Site Property:</b> Not listed
		<b>Surrounding Properties:</b> The majority of the properties surrounding the Site on North Main Street and Winooski Street appear to be residential with the following exceptions: 38 North Main Street – All Creatures Veterinary Clinic

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## 5.0 SITE RECONNAISSANCE

On February 14, 2014, Weston & Sampson personnel performed a visual reconnaissance of the Site. The purpose of the Site reconnaissance was to observe current Site conditions and assess, based on visual observations, if there was evidence of RECs (i.e., release(s) of oil and/or hazardous materials (OHM) to the surface or subsurface) at the Site or its surrounding areas). The Site was snow covered at the time of inspection limiting viewing of surface conditions.

Based on field observations made during the Site reconnaissance, information obtained through EDR and a review of previous investigations, this section presents a description of the environmental setting pertaining to the Site and regional features including topography, groundwater, and geology.

### 5.1. Physical Setting

#### 5.1.1. Site Setting and Topography

Topography of the Site is predominantly flat with a gentle slope toward the west and a steeper approximately 5' drop to the adjacent ball field area to the north. According to the EDR Report, the average elevation of the Site is 421 feet above mean sea level. The Site Locus Map (**Figure 1**) depicts the Site and surrounding topography as based on the United States Geological Survey (USGS) Quadrangle 7.5-minute series topographic map.

Based on a review of the Vermont Agency of Natural Resources Atlas, the Site is located on the fringe of a "Special Flood Hazard Area - AE" defined as an area with 1% annual-chance-flood-event with base flood elevations shown (FEMA Panel:50007C0475D).

#### 5.1.2. Groundwater Characteristics

Weston & Sampson could find no information relating to groundwater conditions specific to the Site. Local groundwater flow direction was inferred from a review of data provided by EDR and local surface topography. It is anticipated that overburden groundwater flows predominantly to the northwest, downslope and towards the Winooski River.

#### 5.1.3. Bedrock and Soil Characteristics

Weston & Sampson observed no bedrock outcroppings at the Site. Information documenting the bedrock geology of the Site was obtained from the Bedrock Geologic Map of Vermont (Ratcliffe, et al, 2011). The Site is located within the Schist member—Light-grayish-green, fine-grained, chlorite-muscovite-quartz phyllite or schist and quartzite; white quartzofeldspathic layers alternate with green chloritic phyllitic layers; locally albitic, of the Jay Peak Formation (Cambrian and Neoproterozoic)

According to the EDR Report, surficial soils at the Site are classified as the Salmon Very Fine Sandy Loam by the United States Department of Agriculture's (USDA) Soil Conservation Service (SCS). The very fine sandy loam soils are described as having moderate infiltration rates, deep and moderately deep, moderately and well drained soils with moderately coarse textures. Based on the Vermont Natural Resources Atlas, flood frequency is "none". The EDR report indicates the Site is within the 500 year flood zone. Soils to the north and western part of the Site are described as Waitsfield Silt Loam with the same characteristics except, with a flood frequency of "frequent".

#### 5.1.4. Potential Environmental Receptors

Based on a review of the Natural Resources Atlas, the Site is not located within a Source Water Protection Area (SWPA) for a public water supply and no private water supplies are located in the vicinity of the Site.

### **5.2. Physical Characteristics**

The following is a list of observations made during the reconnaissance of the Site. Photographs of the Site visit can be found in **Appendix B**.

#### 5.2.1. Land Area and Observations

The surface of the Site to the south of the Library building is paved with bituminous concrete, and is predominantly flat. The remainder of the Site is open, grassed lawn or garden area. The north side of the property drops abruptly to the lower ball fields. The majority of the Site was blanketed with snow on the day of the Site visit. Site photographs are presented in **Appendix B**.

#### 5.2.2. Buildings and Improvements

The Site is improved with a 2-1/2 story historic home renovated for use as a public library. No evidence of the former barn structure to the west of the library identified on the Historic Sanborn Map was observed.

#### 5.2.3. Utilities

The Site building is served with municipal sewer and water. Electric service lines extend overhead from a pole along North Main Street.

### **5.3. Potential Environmental Hazards and OHM Storage and Use**

The information discussed below is based on observations conducted during the Site visit on February 14, 2014.

#### 5.3.1. Hazardous Substances and Petroleum Products

No other evidence of Oil or Hazardous Materials (OHM) storage, other than small quantities of household cleaning materials, was observed at the Site.

#### 5.3.2. Underground Storage Tanks (USTs)

No USTs, or evidence of USTs such as fill or vent pipes, were observed at the Site.

#### 5.3.3. Above Ground Storage Tanks (ASTs)

One 275-gallon AST was observed in the basement of the Library. Oil staining was observed around the top of the tank. No staining was observed on the soils beneath the tank. Multiple sources indicated that the tank was partially submerged but was not disturbed during Hurricane Irene in 2011.

#### 5.3.4. Odors

No odors were detected at the Site.

#### 5.3.5. Pools of Liquid

No pools of liquid were identified at the Site. Limited water along the foundation walls and water staining was observed in the basement.

#### 5.3.6. Drums

Two plastic 55-gallon drums were observed in the community garden area of the Site. One drum was labeled "hazelnut liquid". One was an open top drum filled with water/ice. Mr. Roland Bergeron, who coordinates the community garden, indicated that people used the drums to store water to water their gardens. No other drums were observed at the Site.

#### 5.3.7. Unidentified Substance Containers

No unidentified substance containers were observed at the Site.

#### 5.3.8. Polychlorinated Biphenyls (PCBs)

Fluorescent light ballasts and old windows with caulking were noted throughout the library building. No other evidence of PCBs, such as transformers, was observed at the Site.

#### 5.3.9. Stains or Corrosion

As indicated above, only surficial apparent water staining in the basement was observed within the Site building. The exterior portions of the Site were blanketed with snow.

#### 5.3.10. Drains and Sumps

No drains or sumps were observed at the Site. No catch basins were observed at the Site.

#### 5.3.11. Pits, Ponds, or Lagoons

No pits, ponds or lagoons were observed at the Site.

#### 5.3.12. Stressed Vegetation

No evidence of stressed vegetation was observed at the Site. However, the property was blanketed with snow.

#### 5.3.13. Solid Waste

One to two cubic yards of coal, previously used to power a coal furnace, was observed in the basement of the library. A photograph of the coal pile is included in **Appendix B**. No other solid waste was observed at the Site.

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## 6.0 INTERVIEWS

### 6.1. User and Key Site Manager

Weston & Sampson identified Mr. Steve Lotspeich Community Planner for the Town of Waterbury, as contact for the Site. Mr. Smith completed the User Questionnaire for the interview process. The User Questionnaire is discussed in Section 3.0 and included in **Appendix C**.

### 6.2. Government Offices

Weston & Sampson conducted interviews and/or file reviews at the following Town of Waterbury municipal offices:

- Planning and Zoning
- Assessor's Office
- Volunteer Fire Department
- Department of Public Works

Information obtained from these government offices is discussed in Section 4.2 and throughout the report.

### 6.3. Occupants and Others

The site is occupied by the Waterbury Village Public Library. Mary Kasumapsu, Librarian since 2000, was interviewed and completed a questionnaire which is included in **Appendix C**. Ms. Kasumapsu was not aware of the use, storage or release of hazardous materials at the Site, other than fuel oil stored in the AST in the basement. She indicated that the basement was filled with approximately four feet of water, but the AST did not tip over or float during the Hurricane Irene flooding. She informed Weston & Sampson that the furnace was converted from a coal burning furnace to an oil burning furnace prior to hurricane Irene and repairs to the furnace were required after the flood. Cans of paint previously stored in the basement were fortuitously removed before the flooding occurred.

Mr. Roland Bergeron who coordinates the community garden was contacted for information pertaining to the use of the 1.5 acre parcel adjacent to the library. He indicated the land has been used as a garden for at least 15 years and that it was an undeveloped overgrown field prior to that use. Weston & Sampson inquired about the use or restricted use of herbicide and pesticides. Mr. Bergeron said their use is not specifically restricted, but that their use has not been a concern.

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## 7.0 BUILDING MATERIALS AND RADON GAS ASSESSMENT

CPAI conducted an assessment of lead paint and asbestos in building materials as well as an evaluation of radon gas at the Site. Copies of the CPAI reports including sample locations and quantity estimates are included as **Appendix J**.

### 7.1. Asbestos Containing Building Materials

CPAI performed an asbestos inspection at the Site on February 11, 2014. Asbestos inspection activities were limited to evaluation of accessible suspect asbestos containing building materials. Materials positively identified for asbestos include: mudded pipe joint insulation, corrugated pipe insulation, linoleum floor covering and window glazing. Asbestos thermal insulation debris was reported by CPAI as present throughout the floor of the basement. The complete CPAI report including recommendations is provided in **Appendix J**.

### 7.2. Lead

CPAI performed a lead-based paint inspection at the Site on February 11 and 13, 2014. Lead-based paint was detected on/within the Waterbury Public Library primarily in white paint associated with door and window casings. The complete CPAI lead-based paint inspection report is provided in **Appendix J**.

### 7.3. Radon Gas

Radon screening activities were performed by CPAI from February 11 through February 13, 2014 at the Site. Analysis of the charcoal canisters determined that radon concentrations at 3 of the 4 collection points are above the EPA Action Level of 4.0 pCi/L (picocuries of radon per liter of air). The radon concentration of the 4<sup>th</sup> canister was below the Action Level. Radon concentrations ranged from 5.5 to 6.0 pCi/L. The complete CPAI report is provided in **Appendix J**.

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## 8.0 DATA GAPS

All AAI reports must include an identification of “significant” data gaps (as defined in § 312.20 of AAI final rule and § 12.7 of ASTM E1527-13), if any, in the information collected for the inquiry. Significant data gaps include missing or unattainable information that affects the ability of the environmental professional to identify conditions indicative of releases or threatened releases of hazardous substances, and as applicable, pollutants and contaminants, petroleum or petroleum products, or controlled substances, on, at, in or to the subject property. The documentation of significant data gaps must include information regarding the significance of these data gaps.

Weston & Sampson did not identify any significant data gaps, as defined by ASTM Practice E 1527-13, during the Site reconnaissance and records review that would significantly affect the ability of Weston & Sampson to identify recognized environmental conditions in connection with the Site.

The Site was blanketed with snow on the day of the site reconnaissance limiting observations of staining on the ground surface or stressed vegetation. However, recent photographs and descriptions of the Site included in the recent Archeological and Historic Assessments did not reveal adverse conditions. It is Weston & Sampson’s opinion that the snow cover did not impact our ability to assess RECs at the Site.

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## 9.0 FINDINGS

Weston & Sampson has performed a Phase I Environmental Site Assessment, in conformance with the scope and limitations of ASTM Practice E 1527-13, for 28 North Main Street in Waterbury, Vermont. Limitations, exceptions, or additions to this practice are described in Section 11.0 of this report. The assessment did not identify any specific RECs.

- The Site consists of two parcels, Parcel #900-0030 containing the Waterbury Village Public Library and Parcel #900-0034 is undeveloped land used as a community garden.
- Historic photographs indicate a barn was formerly attached to the west end of the house. Archeological shovel test pits located directly behind the library reportedly encountered deep fill deposits which contained sand and gravel, rocks, coal, coal ash, slate, macadam and brick fragments. Polycyclic aromatic hydrocarbons (PAHs) resulting from the combustion of coal are potential contaminants of concern often associated with this type of “urban fill”. As such, Weston & Sampson identifies the urban fill as a Recognized Environmental Condition at the Site.
- The Site and adjacent properties are not listed with the Vermont Department of Environmental Conservation. No Underground Storage Tanks (USTs) were on record for the Site or adjacent properties.
- Coal previously used to heat the Site was observed in a pile on the floor in the basement. Fuel oil staining was observed around the fill pipe of a 275 gallon AST. No significant staining was observed beneath the tank.
- Historical Sanborn Maps show an auto filling station at the location presently known as 33 North Main Street. The 33 North Main Street property is not listed with VT DEC or identified on any of the databases searched and as such there is no documented release of oil and/or hazardous material at this location. Furthermore, this property is located at a lower elevation and hydrologically downgradient of the Site.
- Bourne’s Energy Inc., which includes an office and garage bays presumably for servicing fuel trucks is located approximately 450’, southeast of the Site 17 North Main Street. This property is not identified on any of the databases searched and as such there is no documented release of oil and/or hazardous material at this location.
- Asbestos containing materials and lead-based paint were confirmed in samples collected by Clay Point Associates Inc. (CPAI). Radon gas was detected at levels exceeding the EPA action levels in 3 of the 4 samples collected at the Site.

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## 10.0 RECOMMENDATIONS

Weston & Sampson recommends that prior to future site redevelopment, coal is removed from the basement and the AST and piping is repaired or replaced.

The extent of “urban fill” should be delineated and environmental sampling and analysis should be performed to assess the presence of PAHs in soils and/or groundwater at the Site.

Prior to renovation/demolition, the services of a certified asbestos and lead abatement contractor should be retained to provide a scope of work and cost estimate to remove and properly dispose of ACBMs and regulated wastes associated with the building. The services of a professional contractor should be retained to implement strategies to reduce radon levels.

To reduce the risk of a significant fuel oil release, the AST and/or piping should be repaired or replaced.

As a good housekeeping measure, the coal in the basement should be removed from the Site and disposed of properly or used for heating.

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## 11.0 LIMITATIONS

This report was prepared exclusively for the Town of Waterbury. Information provided by Weston & Sampson in this report is based solely on the information reported in this document. Future investigations and/or information that was not available to Weston & Sampson at the time of the investigation may result in a modification of the findings stated in this report.

Should additional information become available concerning this Site, or neighboring properties that could directly impact the Site in the future, that information should be made available to Weston & Sampson for review so that, if necessary, conclusions presented in this report may be modified. The conclusions of this report are based on Site conditions observed by Weston & Sampson personnel at the time of the investigation, information provided by EDR, and information provided by federal, state, and local agencies. This report has been prepared in accordance with generally accepted engineering and geological practices. No other warranty, express or implied, is made.

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## 12.0 REFERENCES

ASTM.2000, E 1527-13. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

Hartgen Archeological Associates, Inc., 2014, Phase I Archeological Investigation, Municipal Complex and Expanded Library, Town of Waterbury, Washington County, Vermont, Hartgen Archeological Associates, Inc., Putney, Vermont.

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