



Environmental Report

Water System Name Brattleboro Black Mountain Road Gravity Sewer WSID No. N/A
State Assigned Loan Number RF1-171 Date 8/19/13

I.) Please provide below a brief description of the project including the purpose and need as detailed in the Preliminary Engineering Report.

Please see the attached Environmental Information Document, dated 8/19/13, hereinafter referred to as the EID.

The level of detail and the amount of information provided in this environmental report should be commensurate with the magnitude of construction activities and their potential impact on environmental and historical resources. If, for example, a project is likely to have no or very minimal effects, the project representative needs to formally request a Categorical Exclusion in Section V, make simple statements in the spaces provided in Section VI, and attach any additional information like a qualified consultant assessment or determination letters and permits from regulatory authorities. Projects limited to the existing footprint of a building (e.g., a UV disinfection project) will not need to submit an environmental report at all (not applicable to USDA funding).

A more involved and complex project will go through the same review checklist but there will need to be more analysis, explanation, and documentation provided before DWSRF staff can issue a Categorical Exclusion or a Finding of No Significant Impact (FNSI). Please note that if the project doesn't meet the Categorical Exclusion criteria mentioned in VII.d.1 of the State Environmental Review Process the project

representative shall describe the consequences of a specific activity on a specific resource and establish and discuss any mitigation measure(s) necessary to avoid or minimize any adverse impacts to an environmental or historical resource (see Section VII of this report).

Even though applicants are required to integrate and consider environmental and historical values during a proposed project's planning and design, it is the DWSRF's ultimate responsibility to independently evaluate and verify accuracy of information supplied in this environmental report. The DWSRF takes final responsibility for the scope and content of this environmental report. In order to expedite the application process and DWSRF review and approval of a proposed project, applicants are strongly encouraged to consult early and frequently with our staff to ensure that all environmental issues are described, evaluated, and impacts appropriately considered. If a determination is made that an Environmental Impact Statement is required, the DWSRF will be responsible for initiating the preparation of this document by a third-party.

Through a memorandum of understanding between United States Department of Agriculture-Rural Development and the Vermont Agency of Natural Resources this environmental report format is acceptable to both funding agencies. However, please note that Categorical Exclusion eligibility, public comment, and public notice requirements may differ between the two funding agencies.

II.) Will the project expand capacity to serve more than 500 additional users or a 30% increase in the existing population, whichever is greater? ☐ YES ☒ NO

III.) Does the project call for a new withdrawal of groundwater or surface water? ☐ YES ☒ NO

IV.) Will the project result in a 30% increase in groundwater or surface water withdrawal at an existing site? ☐ YES ☒ NO

V.) Do you believe your project qualifies for a Categorical Exclusion in accordance with the Environmental Review Procedures for projects funded through the Vermont/EPA Drinking Water Revolving Loan Program based on the following environmental information and documentation? ☒ YES ☐ NO

If yes, please fill out only Section VI below. If no, you must fill out Sections VI and VII for all affected environmental and historical considerations (essentially if you answer "yes" in Section VI you will need to follow-up with mitigation measures or an alternative action plan in Section VII).

VI.) Environmental and Archeological Checklist

Please see the attached EID for further discussion of these items.

<u>Considerations</u>	<u>Yes or No</u>	<u>*Basis for Determination and Documentation</u>
A.) <u>Wetlands/Water Resources</u> Will there be construction in Class II or III wetlands?	No, please see EID	<i>A qualified consultant's assessment and/or the regulatory authority's determination must be attached for any construction in wetlands. For any new construction please provide the wetlands classification/delineation.</i>
B.) <u>Floodplains</u> Will the project involve construction	No, please see EID	<i>A detailed description of floodplain construction and a qualified consultant's assessment and/or the regulatory</i>

in a floodplain or impact floodplain development?		<i>authority's determination must be attached. Show locations of all utility infrastructure on the Flood Insurance Rate Map (FIRM).</i>
C.) <u>Stream Alterations</u> Will the project involve construction in a stream?	Potentially – please see EID	<i>A qualified consultant's assessment and/or the regulatory authority's determination must be attached for construction in streams.</i>
D.) <u>Endangered Species</u> Is the project likely to adversely affect an endangered or threatened species?	No, please see EID	<i>A qualified consultant's assessment and/or the regulatory authority's determination must be attached demonstrating compliance with US Fish & Wildlife guidance. (http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm)</i>
E.) <u>Historic Preservation</u> Will the project adversely affect cultural resources such as archeological or historic sites?	No, please see EID	<i>A qualified consultant's assessment and/or the State Historic Preservation Officer's determination must be attached. Please include copies of archeological reports and subsequent phases as needed.</i>
F.) <u>Wild and Scenic Recreational Rivers</u> Is the project within a quarter-mile of a river on the National Park Service's Nationwide Rivers Inventory? Will the project impact a wild, scenic or recreational river area and create conditions inconsistent with the	No, please see EID	<i>For a listing of rivers on the Nationwide Rivers Inventory please visit the following website: http://www.nps.gov/nrcr/programs/rtca/nri/states/vt.html)</i>

character of the river?		
G.) <u>Public Lands</u> Will the project adversely impact formally-classified local, state, and federal lands (e.g., parks, natural areas, wildlife management areas, and wilderness areas)?	No, please see EID	
H.) <u>Farmland</u> Will the project convert Agricultural Soils to non-agricultural uses?	No, please see EID	<i>Projects that convert Agricultural soils will require a determination by both the Vermont State Department of Agriculture and the Natural Resource Conservation Service (Farmland Protection Policy Act; please reference the AD-1006 Farmland Conversion Impact Rating).</i>
I.) <u>NEPA</u> Is there a controversy with respect to environmental effects of the project based on reasonable and substantial issues?	No	
J.) <u>NEPA</u> Is the project significantly greater in scope than normal projects for the area?	No	
K.) <u>NEPA</u> Does the project have significant unusual characteristics?	No	

L.) <u>NEPA</u> Does the project establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects (cumulative impact based on current information)?	No	
M.) <u>NEPA</u> Does the project have significant adverse direct or indirect effects on parkland, other public lands, or areas of recognized scenic or recreational value?	No	
N.) Will the project provide new water facilities to serve populations of over 2000 persons?	N/A	
O.) Is the project known or expected to have a significant negative effect on the quality of the human environment? Is there potential for significant changes to the socio-economic make-up of the area? Is the project cost-effective?	No negative effect. No changes to socio-economic make-up as a result of this project. Project is cost-effective.	
P.) Is additional Land Use and Development Act (Act 250) review and approval necessary?	No, please see EID	<i>A copy of the District Environmental Commission determination on Act 250 permit requirements must be attached.</i>

Q.) Will the project cause other significant environmental impacts?	No, please see EID	

VII.) Mitigation Measures and/or Alternative Plans of Action (if applicable, in order to minimize adverse effects) N/A Please see EID

<u>Affected Environmental or Archeological Resources</u>	<u>Mitigation Measures or Alternative Plan of Action</u>
A.)	
B.)	
C.)	

D.)	
E.)	

Dan Marks 8/19/13 Project Engineer - Hoyle, Tanner & Associates

Prepared By	Date	Title
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Reviewed By	Date	Authorized Representative
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***Basis for Determination and Documentation**

The basis for determination and documentation information must be traceable and establish the factual data to support the response to each question. Any environmental concerns that are raised by federal, state, or local agencies or the public must be addressed as completely as possible and resolved before the environmental report will be considered complete. All supporting documentation (e.g., correspondence and exhibits) should be attached and easily cross-referenced back into the main body of the environmental report. Types of information to be included in this column are outlined below.

1. FIELD OBSERVATION: A site visit that does not usually involve any testing or measurements. FIELD OBSERVATION is an important method for initial screening of the issues, but for some of the categories it may be inadequate for final evaluation. Support documentation should include date of the site visit and by whom.
2. PERSONAL CONTACT: Personal contacts are useful when the individual contacted is an accepted authority on the subject(s) and the interview is documented. Supporting documentation should include the name, organization, and title of the person contacted and the date of the conversation. *Copies of written site inspection reports and determinations by regulatory authorities on applicability of regulations and permit requirements should be attached.*
3. PRINTED MATERIALS: These are useful sources of detailed information, materials such as comprehensive land use plans, maps, statistical surveys, and studies. Information must be current, i.e., not so old that changing conditions make them irrelevant and must represent accepted methodologies. Citations for the material should include enough information so that an outside reviewer can locate the specific reference.
4. SPECIAL STUDY: This is a study conducted for an individual factor or resource, and should be performed by a qualified person using accepted methodologies. Some tests are relatively simple to perform but others may require elaborate equipment or personnel with additional expertise. The preparer is responsible for obtaining assistance from others in

order to have the appropriate test or studies conducted. Copy of the study must be appended or referenced as for Printed Materials.

5. CONTRIBUTOR EXPERIENCE: The professional judgment of the persons contributing to this environmental report can be useful provided their expertise is relevant. The contributor may have previous knowledge from familiarity with the area, or may have professional background to make judgments about a specific factor. Provide information of the person's qualification in addition to name, organization and position.

Honorable Peter Shumlin, Governor Deb Markowitz, ANR Secretary David Mears, DEC Commissioner

This guidance and related environmental information are available electronically via the internet. For information visit us through the Vermont Homepage at <http://www.vermont.gov> or visit VT WSD directly at <http://www.vermontdrinkingwater.org>

Drinking Water and Groundwater Protection Division
103 South Main Street
Waterbury, VT 05671-0403
Toll free 1-800-823-6500
Fax 1-802-338-4890

ENVIRONMENTAL INFORMATION DOCUMENT

1.0 PROJECT IDENTIFICATION

Project Name: Black Mountain Road Gravity Sewer
Town of Brattleboro, Vermont

Address: Mr. Steve Barrett
Public Works Director
211 Fairground Road
Brattleboro, VT 05301

Project Location: Town of Brattleboro
Windham County, Vermont

2.0 SUMMARY OF ENVIRONMENTAL REVIEW

The following documents are listed for reference in conjunction with the Environmental Information Document:

1. *Black Mountain Feasibility Study Final Report*, dated February 2013, prepared by Hoyle, Tanner & Associates, Inc.
2. *Brattleboro Wastewater Treatment Facility Upgrade Conceptual Design Report*, dated March 2009, prepared by Hoyle, Tanner & Associates, Inc., including *Section 6: Evaluation of Collection System Pump Station Upgrade Alternatives*

This information has been reviewed and in accordance with State and Federal regulations, the findings of our environmental review are summarized below:

3.0 PROJECT DESCRIPTION

3.1 Background

The existing Black Mountain Pump Station, located on Black Mountain Road, was constructed in 1976. It accepts flow from a residential area, which includes a university and a mobile home park located adjacent to the station. The station has an exterior manhole that receives flow from an eight (8) inch vitrified clay pipe (VCP) pipe, a six (6) inch pipe from the mobile home park and a floor drain from

the Pump Station. The station discharges through a six (6) inch cast iron pipe (CIP) force main, over Interstate 91 (I-91) and to a gravity sewer that flows south along Route 5 to the Spring Tree Pump Station. There are two compressors and two 150 gallon per minute (gpm) receiver tanks in the existing station. The following concerns with the existing pump station have been identified: the equipment has reached the end of its useful life; there are problems with maintenance; there is a lack of adequate ventilation; the station experiences overheating; and, access concerns. To address these concerns, an upgrade of the Black Mountain Pump Station was designed in conjunction with the Brattleboro Wastewater Treatment Facility (WWTF) Upgrade design project, completed in July 2010.

Following the design of the pump station upgrade, the concept of eliminating the Black Mountain Pump Station and conveying flow by gravity under I-91 was identified. This alternative was deemed to be feasible and the preferred alternative (refer to the *Black Mountain Feasibility Study Final Report*, dated February 2013). This environmental review is based on the installation of a gravity sewer to replace the existing Black Mountain Pump Station.

3.2 Service Area

The Brattleboro WWTF and the associated collection system, including the existing Black Mountain Pump Station, provide sanitary sewer service for approximately 3,100 customer accounts. The existing Black Mountain Pump Station serves approximately 26 wastewater accounts, including the campus of World Learning (SIT) and one account for 29 mobile/trailer homes. In general, the existing Black Mountain Pump Station service area extends west along Black Mountain Road, Kipling Road, and Dickinson Road near SIT for approximately ½ mile from the pump station.

At this time, a future development within the Black Mountain service area is currently under consideration. It has been reported by the Town that this development, located on Buttonwood Hill, could include approximately 30 housing

units. Consideration for the Buttonwood Hill development is independent of the modifications to the existing sewerage infrastructure proposed by this project. See Section 3.6 below for a discussion regarding the potential for additional growth as a result of the proposed gravity sewer project.

3.3 Proposed Improvements Overview

The proposed Black Mountain Road Gravity Sewer Project includes:

- Installation of approximately 1200' of 8" sewer pipe connecting a manhole upstream of the existing pump station with a manhole along Black Mountain Road east of Interstate-91. This will include both open-cut and trenchless pipe installation.
- Demolition of the existing Black Mountain Pump Station.
- Site restoration of the existing Black Mountain Pump Station location.

Topographic survey research began in January 2012 and continued through April 2013. The total area of the existing Black Mountain Pump Station is less than 0.5 acres and is owned by the Town of Brattleboro. Installation of the approximately 1200' of sewer pipe will be divided on land owned by the Town of Brattleboro (~300'), land within the Vermont Agency of Transportation (VTRANS) right-of-way and under I-91 (~350'), land owned by the Tri-Park Cooperative Housing Corporation (~240'), land owned by the Locust Ridge Cemetery Association (~160'), and land owned by the VFW Carl M Dessaint Post 1034 (~150'). Please see the attached Proposed Site Plan for the Black Mountain Road Gravity Sewer.

3.4 Project Schedule/Duration

The following design and construction schedule is proposed:

Final Conceptual Design Report (for upgrade of pump station)	March 2009
Bond Vote	May 2009
Black Mountain Feasibility Study Final Report	February 2013
Start Final Design	March 2013
Construction Start / Complete	Spring 2014

3.5 Population Data

The estimated populations from the US Census Bureau are listed below.

Area	2010
State of Vermont	625,741
County of Windham	44,513
Town of Brattleboro	7,414
Served by Project	540 (max day)

Table 1: Population Data

Based on U.S. Census data and average maximum occupants at SIT, approximately 420 people (maximum day) are served by the existing Black Mountain Pump Station infrastructure. In addition, the Town is reportedly planning for an additional 30-unit development on Buttonwood Hill in the service area. At an average of 2.09 people per house, based on the 2010 U.S. Census data for Brattleboro, this development would bring the total population served by this project to approximately 483 people (maximum day). This represents an approximate 15% growth in the service area. As noted above, consideration for the Buttonwood Hill development is independent of the modifications to the existing sewerage infrastructure proposed by this project. The area above the existing pump station that would be served by this proposed project is zoned as rural residential, with 1-2 units per 1.5 acres by right; 3-4 units as a conditional use.

3.6 Flow Projections

The following table lists the flow projections for the Black Mountain Road Gravity Sewer in the immediate future:

Source	Quantity	Unit Flow	Subtotal Flow
Mobile/trailer homes	29 homes	210 gpd/household	6,090 gpd
SIT – Max. Residents	200 people	100 gpd/person	20,000 gpd
SIT – Max. Visitors	100 people	50 gpd/person	5,000 gpd
Buttonwood Hill	30 homes	210 gpd/household	6,300 gpd
		Total Flow	37,390 gpd

Table 2: Immediate Future Flow Projections

The following table lists the future potential flow projections for the Black Mountain

Road Gravity Sewer assuming full build-out of the service area, described in Section 3.2 above, in accordance with the zoning described in Section 3.5 above:

Total Potential Service Area ¹	185 acres
Maximum Conditional Use	4 units per 1.5 acres
Total Allowable Units	495 units
Average Sewage Flow per Unit	210 gpd/unit
Full Build-out Total Sewage Flow	103,950 gpd

Table 3: Full Build-out Flow Projections

Notes:

1. Total potential service area is calculated based on gravity flow to the location of the existing pump station using topographic limits.

The existing gravity sewer influent to the Black Mountain Pump Station is 8”.

Assuming this pipe continues at minimum slope, the 8” pipe will have a capacity of 350 gpm, or 504,000 gpd, which will be adequate for the immediate future flows and the full build-out flow projections.

The proposed 8” gravity sewer pipe is specified to continue the 8” service from upstream of the project area, to meet the immediate flow needs of the service area, and to satisfy the minimum sewer sizing guidelines for public gravity sewers, as described in sewer design manuals such as the New England Interstate Water Pollution Control Commission (NEIWPCC) TR-16.

The existing pump capacity is 150 gpm, or 216,000 gpd. Therefore, the hydraulic capacity of the proposed gravity sewer will increase by 133% when compared to the existing pump station. However, the increase in hydraulic capacity will not lead to an increase in potential for additional development in the area.

As is described in Table 3 above, the existing pump station infrastructure has sufficient capacity to convey sewage from a theoretical full build-out of the service area. In other words, the proposed gravity sewer does not increase the potential for additional development over the existing pump station. Furthermore, the proposed gravity sewer is not extending or modifying the existing service area. This project is a replacement of the existing pumping infrastructure only. Finally,

sewage to be conveyed to the Town's Wastewater Treatment Facility will be subject to the same hydraulic limitations downstream of the proposed project as are currently in place, including the Putney Road Interceptor and the Spring Tree Pump Station.

The purpose of the proposed project is to replace the existing pump station equipment, which has reached the end of its useful life, and to realize significant operational, maintenance, and energy savings. The intention of the proposed gravity sewer is not to increase sewage conveyance capacity or the potential for additional development as a result of this project.

3.7 Roles and Responsibilities of Local Government

The Town of Brattleboro will operate and manage the proposed sewer. The Town of Brattleboro will work with adjacent property owners to obtain easements for future access and sewer maintenance.

4.0 PURPOSE & NEED

The primary objective of this project is to replace the existing Black Mountain Pump Station with a gravity sewer, which will allow the Town of Brattleboro to realize significant operational, maintenance, and energy savings, due to the elimination of ongoing pumping demands, daily maintenance checks and building related energy needs.

Below is a brief summary of the major deficiencies at the existing Black Mountain Pump Station. A comprehensive discussion of the existing pump station conditions is provided in the *Brattleboro Wastewater Treatment Facility Upgrade Conceptual Design Report*, dated March 2009, prepared by Hoyle, Tanner & Associates, Inc. (refer to Section 6, Evaluation of Collection System Pump Station Upgrade Alternatives).

4.1 Pumping Equipment

The existing station has two compressors and two Smith & Loveless ejector tanks

(150 gpm) receivers located in a concrete chamber directly below the station. In efforts to keep up with the flow, the compressors have overheated. In addition, the existing pump system is over 30 years old and has reached the end of its useful life. Spare parts can be difficult to obtain due to the age of the equipment.

4.2 Ejector Station Access

Access to the ejector station and emergency wet well is by confined space entry and is a safety concern. The VOSHA/OSHA mandated procedure for confined space access increases maintenance time and requires additional equipment.

4.3 Plumbing, Heating and Ventilation

No general ventilation exists for the at-grade portion of the pump station. Overheating of the above ground portion of the pump station has been reported during the summer season due to the air compressor operation. It is uncertain if the drywell is vented adequately to avoid a hazardous condition. The building is heated with an electric unit heater. A single trapped floor drain serves the pump station, and the potential exists for the trap seal at the floor drain to evaporate and for sewer gases to enter the building.

5.0 DISCUSSION OF ALTERNATIVES

A detailed presentation of alternatives for pump station upgrades was put forth in the *Brattleboro Wastewater Treatment Facility Upgrade Conceptual Design Report*, dated March 2009, prepared by Hoyle, Tanner & Associates, Inc (refer to Section 6, Evaluation of Collection System Pump Station Upgrade Alternatives). A comparison of the selected pump station upgrade alternative to the gravity sewer alternative was presented in the *Black Mountain Feasibility Study Final Report*, dated February 2013, prepared by Hoyle, Tanner & Associates, Inc. These comprehensive alternative evaluations are not summarized here. Interested parties are encouraged to review the documents listed above.

6.0 PROPOSED FACILITY IMPROVEMENTS

The improvements proposed under this project are the installation of gravity

sewer piping to replace the existing pump station. The existing pump station will be demolished and the property repurposed. These improvements will allow the Town to realize significant operational, maintenance, and energy savings, due to the elimination of ongoing pumping demands, daily maintenance checks and building related energy needs.

7.0 IMPACT OF PROPOSED PROJECT ON THE ENVIRONMENT

7.1 Direct Impact

Air Quality

No direct impacts to air quality are anticipated as a result of this project. Construction activities could create a temporary negative impact to air quality in the immediate area due to the use of diesel-drive construction equipment. Equipment operation may also temporarily increase airborne particulates (dust).

Water Quality and Quantity

The completed project will not impact the quality or quantity of sewage, which is destined for the Town's Wastewater Treatment Facility. This project will not impact groundwater or drinking water supplies. Applicable construction stormwater control measures will be employed in accordance with permit requirements to effectively manage stormwater runoff.

Floodplains

The proposed project is located outside of the mapped floodway area as indicated on the Windham County, Vermont Flood Insurance Rate Map (FIRM) dated September 28, 2007. The site is located in FIRM Zone X, described as an area of minimal flood hazard. Please see the attached FIRM maps.

Wetlands

Based on the Agency of Natural Resources (ANR) Natural Resources Atlas tool and the available Vermont Significant Wetland Inventory (VSWI) Maps, there are not any wetlands in the vicinity of the proposed project site. There are no hydric soils mapped on the ANR Natural Resources Atlas. There are no indications of

wet areas from on-site observations. Please see the attached wetlands map of the project area.

Prime Agricultural Land

Based on the ANR Natural Resources Atlas tool, there are areas designated “Statewide” in the project vicinity. The Vermont Agency of Agriculture, Food & Markets has reviewed the site and does not have any concerns with the proposed project. Please see the attached agricultural soils map of the project area and letter from the Vermont Agency of Agriculture, Food & Markets.

Stream Modifications

The proposed project will cross underneath Sargent Brook on the east side of I-91. A stream alteration permit will be filed if it is determined to be required and installation methods will meet the permit requirements.

Land Use

The proposed project site is located in proximity to the existing pump station and Black Mountain Road in Brattleboro. Portions of this project will impact adjacent land owners and the VTRANS right-of-way property, including under I-91, and the Town will secure any necessary easements and future right-of-ways.

Relocation of People

People or businesses will not be relocated as a result of this project.

Socio-Economic Impacts

The primary socio-economic impacts of this project will be the significant operational, maintenance, and energy savings, due to the elimination of continuous pumping demands, daily maintenance checks and building related energy needs.

The total project cost for the gravity sewer installation project is estimated at \$977,000. A detailed presentation of the estimated project costs is provided in

the *Black Mountain Feasibility Study Final Report*, dated February 2013, prepared by Hoyle, Tanner & Associates, Inc. The Town has applied for State financing through the Clean Water State Revolving Fund (CWSRF) program for FY 2014 to fund design and construction of the gravity sewer. This project will to be included in the WWTF Upgrade \$32.8 million bond authorization, which was approved by Town Representatives on May 8, 2009. It is understood that the Town of Brattleboro's Attorney has confirmed that this project does not warrant a re-vote on the bond authority.

Construction of the project will be publicly advertised and competitively bid with special notices sent to Disadvantaged Business Enterprises. The project will create temporary construction jobs including a project manager, construction superintendent, skilled tradesmen, skilled and unskilled laborers, and equipment operators.

Under this project, the existing Black Mountain Pump Station will be demolished and the remaining site may lend itself to multi-use opportunities or park creation. The Town of Brattleboro cannot commit to the future use of the project area at this time.

Historical/Archeological Site Review

The proposed gravity sewer pipe will be installed in areas that have all been previously disturbed as a result of Interstate-91 and Black Mountain Road construction. On 6/28/13, a State Historic Preservation Office (SHPO) representative visited the site and determined that an Archaeological Resources Assessment (ARA) is not required.

Endangered Species

The ANR Natural Resources Atlas indicates that there are rare species in the vicinity of the existing pump station. The project area within the identified rare species territory includes the existing pump station and approximately 200' of sewer pipe, proposed to be installed via open cut. The Vermont Department of

Fish and Wildlife has indicated that there are no anticipated impacts or required mitigation with regards to the proposed project. Please see the attached rare and endangered species map for the project area and letter from the Vermont Department of Fish & Wildlife.

Hazardous Waste Site Review

The ANR Natural Resources Atlas indicates that there is a hazardous waste site in the trailer park, which is adjacent to the existing pump station. This hazardous waste site was established when approximately 200 gallons of fuel oil was released from an above ground storage tank. The tank was repaired, and approximately 80 tons of petroleum contaminated soils were excavated and treated. Five groundwater monitoring wells were installed, and samples were collected semi-annually for two years. Analyses of groundwater samples no longer indicate evidence of petroleum compounds. The site has been designated SMAC (site management activity completed) status, and is listed as not having any land use restrictions. It is not anticipated that this or any other hazardous waste site will have impacts on the proposed project. Please see the attached hazardous waste site map of the project area.

Coastal Zone Management

There are no coastal zones in the State of Vermont.

Wild and Scenic Rivers

There are no wild and scenic rivers within proximity to the proposed project site.

7.2 Indirect Impacts

The proposed gravity sewer project will not adversely impact the Town's ability to collect or treat wastewater. The proposed project will, however, provide benefits to the community through the decreased operation and maintenance burdens and energy costs. This project will result in one less building facility and associated process, HVAC and electrical equipment to operate and maintain, freeing Town personnel time and resources for other Town needs. Located at the northern

extent of Town, Town personnel must travel further only to visit the existing pump station. The result will be a lower burden on rate payers in Town and a more efficient Town workforce.

As the proposed project will not increase the future potential for additional development, there will be no adverse indirect environmental impacts. Please see the discussion in Section 3.6 above.

8.0 MITIGATION OF ENVIRONMENTAL IMPACTS

Proposed mitigation measures to minimize the anticipated short term environmental impacts identified in Section 7 include:

8.1 Air Quality Impacts

Dust and exhaust fumes resulting from construction activities may adversely affect air quality. Construction documents will require the contractor to control dust and exhaust fumes with appropriate techniques and equipment consistent with Federal, State and Local Regulations.

8.2 Water Quality Impacts

Erosion and sedimentation resulting from uncontrolled runoff could adversely affect water quality in the adjacent Sargent Brook. Erosion and sediment control measures and maintenance of the controls will be stipulated in the construction documents.

9.0 SUMMARY OF AGENCY AND PUBLIC CONSULTATION

Brattleboro staff and the project design team worked closely with the Vermont Department of Environmental Conservation (VTDEC), Facilities Engineering Division relative to the WWTF Upgrade project. VTDEC was kept informed of project development as the gravity sewer alternative was identified and assessed.

9.1 Public Participation

The public outreach and education portion of the Brattleboro Wastewater Treatment Facility (WWTF) Upgrade project included discussions regarding the replacement of the existing Black Mountain Pump Station. This effort began in October 2008 and has continued throughout the WWTF Upgrade project until the present.

9.2 Public Objections

No significant objections to the project have been raised to date.

9.3 Permit Review

The potential permits that may be required for this gravity sewer installation project have been reviewed with the Vermont Agency of Natural Resources. To this end, a Project Review Sheet was completed by a Permit Specialist with the Environmental Assistance Office of the Vermont Department of Environmental Conservation (VTDEC). The following permits are applicable to this project: VTRANS 11-11 Permit, Stream Alteration Permit, and local Demolition Permit for the existing pump station.

10.0 List of Agencies and Groups Consulted

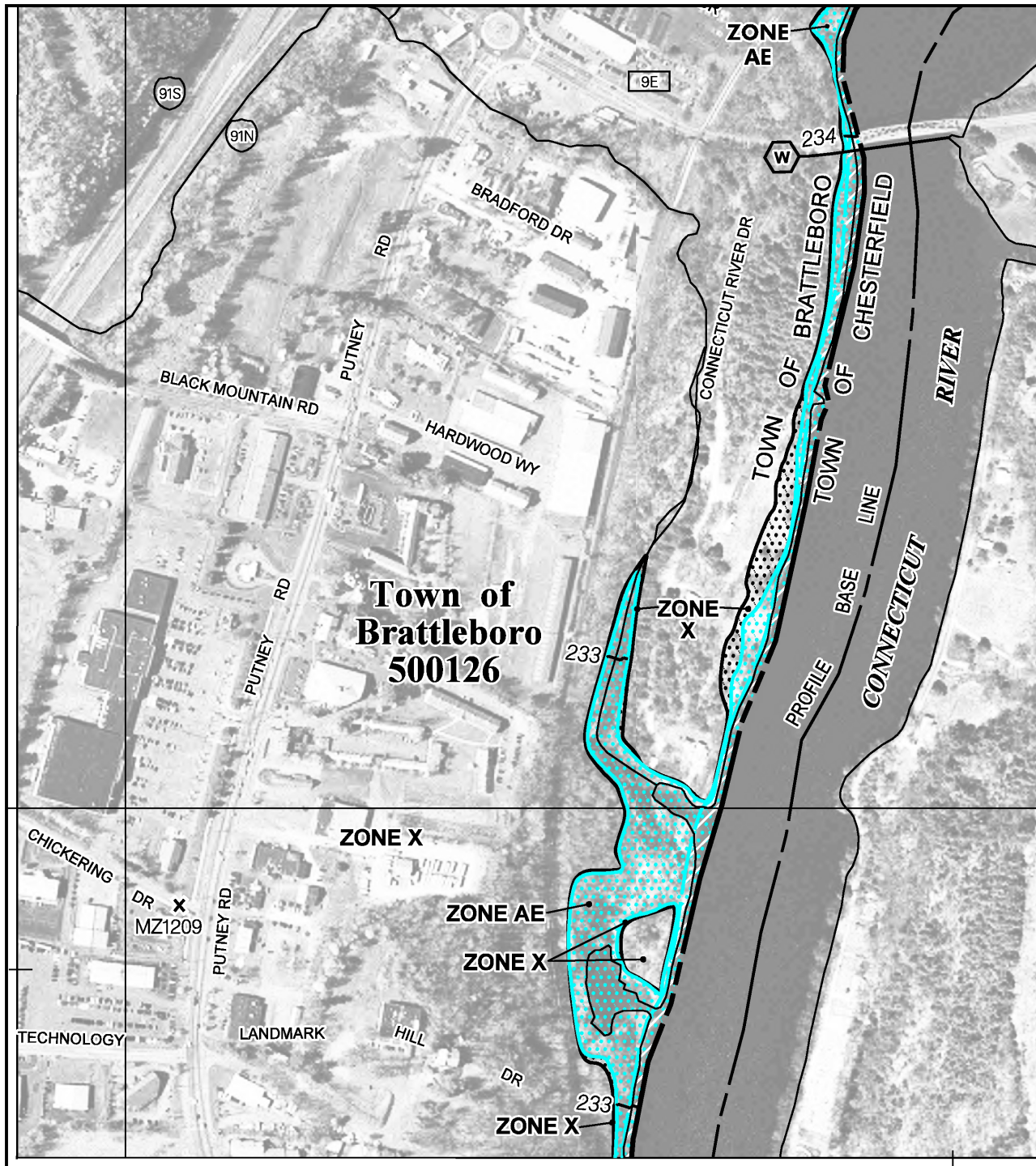
The following contacts have been made to date relative to the proposed project:

- Ms. Lynnette Whitney, P.E. VT DEC, Facilities Engineering Division
- Mr. Thomas Joslin, P.E., VT DEC, Facilities Engineering Division
- Mr. Winslow Ladue, VT DEC, Facilities Engineering Division
- Ms. Jackie Carr, VT ANR Permit Specialist
- Mr. David DiDomenico, VT DEC, Wastewater Management Division, Discharge Permits Section
- Mr. Kyle Davis, VT Agency of Agriculture, Food & Markets
- Mr. Todd Menees, VT DEC, Watershed Management Division
- Mr. Everett Marshall, VT Department of Fish & Wildlife
- Mr. Brian Bannon, Town of Brattleboro Planning and Zoning

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- Mr. Brian McAvoy, Vermont Agency of Transportation, Utilities Division
 - Mr. Shaun Corbett, Vermont Agency of Transportation, Utilities Division
 - Mr. Nick Wark, Vermont Agency of Transportation, Utilities Division
 - Mr. Gary Swindler, Efficiency Vermont
 - Abutter's representatives, including from the Tri-Park Cooperative Housing Corp., Locust Ridge Cemetery Association, and VFW Carl M. Dessaint Post 1034, Inc.

ATTACHMENTS

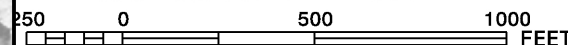
FLOOD INSURANCE RATE MAPS (FIRM)



National Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 500'



NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0393E

FIRM
FLOOD INSURANCE RATE MAP
WINDHAM COUNTY,
VERMONT
(ALL JURISDICTIONS)

PANEL 393 OF 652

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BRATTLEBORO, TOWN OF	500126	0393	E
DUMMERSTON, TOWN OF	500128	0393	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

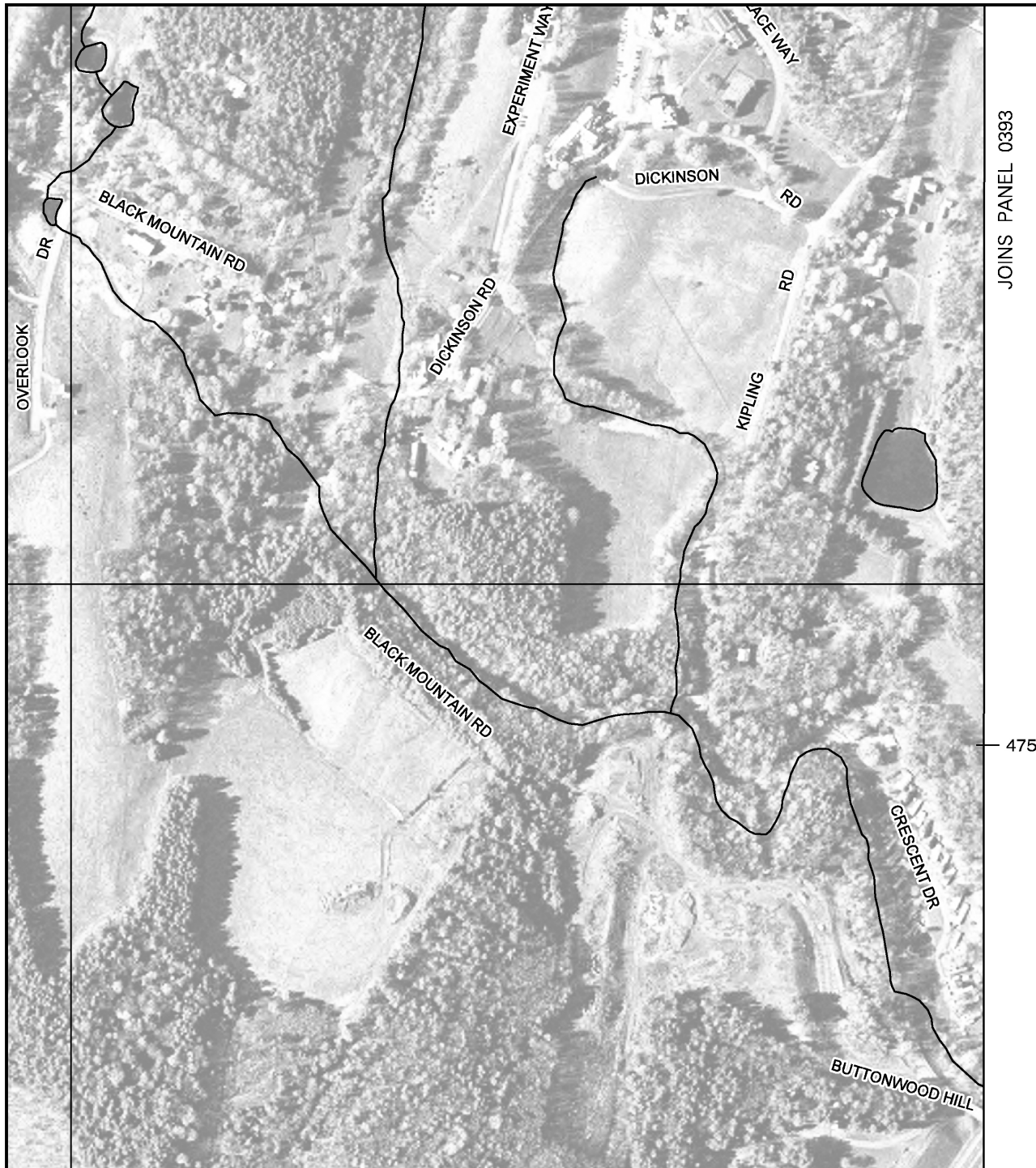


MAP NUMBER
50025C0393E

EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

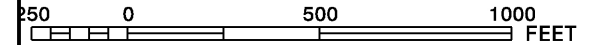


JOINS PANEL 0393

onal Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 500'



NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0389E

FIRM
FLOOD INSURANCE RATE MAP
WINDHAM COUNTY,
VERMONT
(ALL JURISDICTIONS)

PANEL 389 OF 652

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

<u>COMMUNITY</u>	<u>NUMBER</u>	<u>PANEL</u>	<u>SUFFIX</u>
BRATTLEBORO, TOWN OF	500126	0389	E
DUMMERSTON, TOWN OF	500128	0389	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



MAP NUMBER
50025C0389E

EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency

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ANR NATURAL RESOURCES ATLAS:
WETLANDS



LEGEND

Wetlands - VSWI

Class 1 Wetland

Class 2 Wetland

Wetlands - VSWI Advisory Lay

Soils - Hydric

Town Boundary



1: 4,508

August 8, 2013



229.0 0 114.00 229.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere

© Vermont Agency of Natural Resources

1" = 376 Ft. 1cm = 45 Meters

THIS MAP IS NOT TO BE USED FOR NAVIGATION

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NOTES

Map created using ANR's Natural Resources Atlas

**ANR NATURAL RESOURCES ATLAS:
PRIME AGRICULTURAL LAND &
LETTER FROM VERMONT AGENCY OF AGRICULTURE, FOOD & MARKETS**



LEGEND

Soils - Prime Agricultural

- Local
- Local (b)
- Not rated
- Prime
- Prime (b)
- Prime (f)
- Statewide
- Statewide (a)
- Statewide (b)
- Statewide (c)

Town Boundary



1: 4,508

August 8, 2013



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NOTES

Map created using ANR's Natural Resources Atlas



Agency of Agriculture, Food & Markets
116 State Street
Montpelier, VT 05620-2901
www.VermontAgriculture.com

August 15, 2013

Town of Brattleboro
c/o Daniel B. Marks
Hoyle, Tanner & Associates, Inc.
150 Dow Street
Manchester, NH 03101

Re: Black Mountain Road Gravity Sewer—Brattleboro, Vermont
Consideration of Primary Agricultural Soils

The Agency of Agriculture, Food & Markets (the "Agency") was contacted to review the impacts to primary agricultural soils from the above-referenced project in order to determine the project's eligibility for state funding. This project is not subject to Vermont's land use statute Act 250.

According to the materials reviewed, this project will not impact primary agricultural soils. The proposed pipeline route crosses only one area that is mapped as containing soils of "statewide importance." However, these soils are located in a highly developed urban area. There is some question so to whether the soil should still be considered primary agricultural soil. Because this project is not subject to Act 250, the Agency reserves the right to answer the question at a later date.

Therefore, the Agency has no objection to the project as it is intended to serve the public good.

Sincerely,

A handwritten signature in black ink, appearing to read "Kyle Davis".

Kyle Davis
Act 250 Specialist
Vermont Agency of Agriculture, Food & Markets
116 State Street
Montpelier, VT 05620-2901
802-828-2082
Kyle.davis@state.vt.us



**ANR NATURAL RESOURCES ATLAS:
RARE, THREATENED AND ENDANGERED SPECIES &
LETTER FROM VERMONT DEPARTMENT OF FISH & WILDLIFE**



LEGEND

Rare Threatened Endangered

 Threatened or Endangered

 Rare

 Town Boundary



1: 4,508

August 8, 2013



229.0 0 114.00 229.0 Meters

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NOTES

Map created using ANR's Natural Resources Atlas

Department of Fish and Wildlife

1 National Life Dr., Davis 2

Montpelier, VT 05620-3702

www.vtfishandwildlife.com

[phone] 802-241-3700

[fax] 802-828-1250

Agency of Natural Resources

August 19, 2013

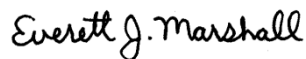
Dan Marks
Hoyle, Tanner and Associates, Inc.
150 Dow St.
Manchester, NH 03101

Re: proposed replacement of an existing pump station with a gravity sewer
Black Mountain Rd., Brattleboro VT

Dear Dan,

I don't see any potential issues with this project as planned with regards to the rare, threatened and endangered species. In the Natural Resource Atlas, there is overlap of the circle depicting a rare plant. The circle is a point with a large buffer do to large uncertainty of the location. However, I don't believe that area where this project is proposed is of concern.

Sincerely,

**Everett Marshall**

Natural Heritage Information Manager

Wildlife Diversity Program

Tel: 802-371-7333



ANR NATURAL RESOURCES ATLAS:
HAZARDOUS WASTE SITE



LEGEND

- ◆ Hazardous Waste Site
- ◆ Town Boundary



1: 4,508

August 8, 2013



229.0 0 114.00 229.0 Meters

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