

BRISTOL, VERMONT

2020-2021

ANNUAL CORE AREA WASTEWATER SYSTEM  
EVALUATION

APRIL 2021

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BRISTOL, VERMONT  
2020-2021 ANNUAL CORE AREA WASTEWATER SYSTEM EVALUATION

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SECTION I

INTRODUCTION

## SECTION I

### INTRODUCTION

This 2021 Annual Report on the inspection and evaluation of the Bristol Core Area Wastewater System has been prepared to fulfill the conditions of Bristol's Discharge Permit No. ID-9-0208-1A.

The system has been operating since September 1, 1993 and consists of collection sewers, septic tank, and disposal fields.

Inspection of the sewage collection, treatment and disposal systems was performed on April 26, 2021 by Alan Huizenga of Green Mountain Engineering, Inc. with the assistance of Mr. Cyrus Marsano of Vermont Utility Management Services (VTUMS).

The Report shows a list of items inspected; the conditions encountered, and recommended repairs or changes in operation required. The Report is organized so each item is designated by the same letter as appears in Section D2, Annual Inspection, of Bristol's Discharge Permit. GME will be available to the Operator for review of the recommendations.

SECTION II

WASTEWATER SYSTEM INSPECTION

## SECTION II

### WASTEWATER SYSTEM INSPECTION

#### **Item A: Collection System Inspection**

MH#11 -Low flow/good condition  
-Dirty shelves  
-No evidence of back-up

MH#10A - Low flow / good condition  
- Rim chipped in two places from traffic – no action required  
- Grout need repair

MH#10 - Excellent condition  
- Grout needs repair

Mary's Grease Trap  
- Not in use, not inspected due to vehicle parked over the manhole

MH#9 - Low flow / good condition  
- Grout needs repair

MH#8 - Shallow manhole  
- gravel on shelves  
- Excellent condition

MH#7 - Under stone drive - not inspected

Hendee's Grease Trap  
- Presently in use  
- not inspected due to vehicle parked over the manhole  
- Quarterly Pumping Schedule – Pumping Due

MH#6 - Under stone drive - not inspected  
-

MH#5 - Good condition  
-Dead end, low flow, dirty shelves  
- Grout needs repair

MH#4 - Good Condition, low flow  
- Grout needs repair

MH#3 - Low flow / good condition

Snap's Grease Trap

- Good Condition,  
Quarterly Pumping Schedule – Pumping Due
- Grout needs repair

MH#2

- Not found
- Paved over by streetscape project – riser planned for Summer 2021

MH#1

- Good condition
- Dead end, low flow

Bakery Grease Trap

- Quarterly Pumping Schedule - Pumping Due
- Good Condition

Cubbers Grease Trap

- Quarterly Pumping Schedule - Pumping Due
- Good Condition,

Treatment/Disposal System

- Operator has worked on clearing sumac growth near field edges and site looks very good...future clearing should focus on access SW well – Field #3
- some subsidence noticed 2020 near SW well – Field #3 – no change/action at this time

Interior Grease Traps

- Not inspected
- Operator reports that some establishments are doing better and now have local hauler cleaning out quarterly with external grease traps

Viens Dosing Siphon

- Riser and Cover replaced in 2020
- Siphon appears operational

**Item B: Septic Tank Inspection**

- Sludge/Scum Depth measurements performed by Operator
- Pumping Cell #1 recommended at time of inspection.
- Effluent box trough needs to be rebuilt.

Cell #1

- Compartment #1 – Sludge 24” – Scum 8”
- Compartment #2 – Sludge 24” – Scum 18”

Cell #2

- Compartment #1 – Sludge 12” – Scum 6”
- Compartment #2 – Sludge 12” – Scum 0”

- Pistons – inoperable – have been removed
- Slide gates repaired last year.
- Interior handles rusted, close to inoperable
- Locks and hasps on hatches, for safety, in good operable condition

**Item C: Grease Interceptor Inspection**

- Part of Item A. above

**Item D: Splitter Box Inspection**

- Fields #3, #5, #7 and #8 in operation at time of inspection. Fields were switched by Operator during inspection.
- good flow, very little grease observed
- Periodic skimming every other week ongoing by Operator

**Item E: Dosing Siphon Inspection**

- Siphons appeared to be operating properly at time of inspection.
- Operator should verify operation of siphons on Fields #1, #2, #4 and #6 once receiving sufficient flow
- Counters not operational



**Item F: Field Rotation**

- Fields currently in operation (#3, #5, #7 and #8). Fields were switched to Fields #1, #2, #4 and #6 during inspection.

**Item G: Shallow In-field Observation Wells**

- In-ground observation wells opened up for observation.
  - All observation wells found, except Fields Nos. 1, NW corner well
  - Field #1 – dry
  - Field #2 – dry
  - Field #3 – dry
  - Field #4 – dry
  - Field #5 – dry
  - Field #6 – dry
  - Field #7 – dry
  - Field #8 – dry
- All caps should be removed, cleaned and grease applied  
-Field #6, NW riser and Field #7, SW riser should be raised

**Item H: Groundwater Level Measurements**

- Table 3 summarizes groundwater levels for June 2020 and September 2020, showing values of groundwater depths ranging from 18.2 feet to 41.2 feet below ground surface.

SECTION III

WASTEWATER SYSTEM EVALUATION AND RECOMMENDATIONS

## SECTION III

### WASTEWATER SYSTEM EVALUATION AND RECOMMENDATIONS

#### A. Collection System

1. Evaluation / Recommendations
  - a. Review Table 4

#### B. Treatment / Disposal System

1. Evaluation

The system is in good working condition and is in its 28th year of operation. The site is in good condition. Effluent testing has been performed as per Permit conditions. The siphon counters are not working at this point. The Operator should consider replacing the counters with mechanical counters when the siphons are repaired. GME recommends pumping of Cell #1 at this time.

The fields show no signs of effluent surfacing. The groundwater monitor wells show the natural groundwater level to be well below the trench bottoms. Sumac and other vegetation that was encroaching onto the fields on the north and west sides has been cut back, but should be continued to be cut back to the steep bank.

Recent improvements noted include replacement of slide gates.

Nitrate levels appear to be varying substantially in recent years. Monitoring Well No. 3 results for June and September were 3.5 and 3.8 mg/l in 2017, 4.5 and <0.2 in 2018, 2.0 and < 0.2 in 2019 and 1.3 and 0.16 in 2020. Monitoring Well No. 4 results for June and September were <0.20 and 0.12 mg/l in 2017, 1.5 and 1.7 in 2018 and 1.7 and 5.9 in 2019 and 3.3 and 5.1 in 2020. The September 2018 result appears to be an outlier, but the levels will continue to need to be monitored.

Wastewater quality results for the system are shown in Table 2. These results indicate the wastewater is of relatively high strength as might be expected for a small municipal system lacking industrial type users. Grease levels were slightly lower this year.

Treatment Facility flow data is presented in Appendix D. Average Daily Flow (ADF) was 6,082 gpd, based on water meter readings from April 9, 2020 to April 20 2021.

2. Recommendations
  - a. Review Table 4, with special attention to the Septic Tank Effluent box and various manholes, which is in need of grout repairs.

- b. Make sure checklists are utilized as shown in the O & M Manual,
- c. Monitor split closely, which will be easier as checklists are followed and as a consistent number of fields are used. Clean v-notches with a toilet brush on a rod, kept at the facility. This task should be performed bi-weekly. This will help maintain more consistent split. Maintain splitter box on regular pumping schedule (with grease traps),
- d. Maintain grounds by mowing, trimming, repairing road, etc., as needed. (Presently mowing is subcontracted and performed weekly).
- e. Inventory interior grease traps and require reporting of maintenance and pumping. (ie. Wokkies, Bobcat, & former Corner Store)
- f. Pump Cell #1 septic tank contents this summer.

# **APPENDIX A**

## **TABLES**

**TABLE 1**  
**FIELD USAGE AND FLOW SUMMARY \***  
**BRISTOL, VT (April 1, 2020 - March 31, 2021)**

<b>FIELD</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>DAYS IN SERVICE</b>	---	---	---	---	---	---	---	---
<b>TOTAL GALLONS</b>	---	---	---	---	---	---	---	---
<b>ADF</b>	---	---	---	---	---	---	---	---

\* Siphon counters are not operational.

**TABLE 2**  
**TOWN OF BRISTOL WASTEWATER QUALITY RESULTS**  
**2010 - 2020**

PARAMETER	June 2010	Sept. 2010	Sept. 2011	Oct. 2011	June 2012	Sept. 2012	June 2013	Sept. 2013	June 2014	Sept. 2014	June 2015	Sept. 2015	June 2016	Sept. 2016	June 2017	Sept. 2017	June 2018	Sept. 2018	June 2019	Sept. 2019	June 2020	Sept. 2020
Chloride	59	57	72	72	74	54	56	52	71	83	110	100	98	110	100	99	99	62	86	81	69	74
Nitrogen, Ammonia	44	49	66	63	64	53*	67*	48*	66	68	68*	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Nitrogen, Nitrite	<0.2	<0.2	<0.20	0.83	<0.20	<0.04	<0.04	<0.04	<0.2	<0.2	<0.2	<0.2	<0.2	<0.04	<0.02	<0.2	0.31	<0.2	<0.2	<0.2	0.22	<0.2
Nitrogen, Nitrate	N/A	N/A	N/A	N/A	N/A	<0.020	<0.04	<0.04	<0.2	<0.02	<0.2	<0.2	<0.02	<0.04	<0.02	<0.2	<0.02	<0.2	<0.2	<0.2	<0.2	<0.2
Total Dissolved Phosphorus	9.5	9.3	11	10.0	12	7.7	8	6.2	9	8.9	7.3	8	8	8.7	8.4	8	8.9	6.5	9.3	8.6	8.6	8.7
Biochemical Oxygen Demand (5-day)	370	290	340	380	540	320	450	330	500	510	460	480	510	470	700	510	650	550	720	560	560	490
Total Suspended Solids	85	44	53	67	79	65	68	97	108	164	106	88	82	88	160	86	140	96	150	98	70	86
Oil and Grease	25.8	14.7	18.7	19	25.9	17.8	31.6	45.4	28.1	34.6	76.1	15.7	26	23.4	27.3	19.1	22.4	31.7	42.8	65.9	32.3	37.1

**NOTES:**

1. TESTED PARAMETERS ARE REPORTED IN MILLIGRAMS PER LITER (PPM)
2. WASTEWATER QUALITY RESULTS PRIOR TO 2010 ARE NOT DISPLAYED, BUT ARE AVAILABLE
3. WASTEWATER QUALITY RESULTS ARE FOR SAMPLES FROM THE SPLITTER BOX (AFTER THE SEPTIC TANK)
4. NR = NOT REPORTED

\* Reported as TKN

**TABLE 3  
GROUNDWATER LEVEL MEASUREMENTS  
BRISTOL, VERMONT  
#ID-9-0208-1A**

<b>DATE</b>	<b>Well #</b>	<b>Well Depth (Feet)</b>
6/6/20	2	18.2'
	3	33.9'
	4	40.3'
6/13/20	2	18.2'
	3	33.6'
	4	40.3'
6/20/20	2	18.23'
	3	34.0'
	4	40.5'
6/27/20	2	18.3'
	3	33.8'
	4	40.5'
9/1/20	2	19.6'
	3	35.4'
	4	40.9'
9/8/20	2	18.7'
	3	34.4'
	4	40.9'
9/15/20	2	18.3'
	3	34.5'
	4	41.1'
9/22/20	2	18.4'
	3	34.5'
	4	41.2'
9/29/20	2	18.6'
	3	34.5'
	4	41.1'

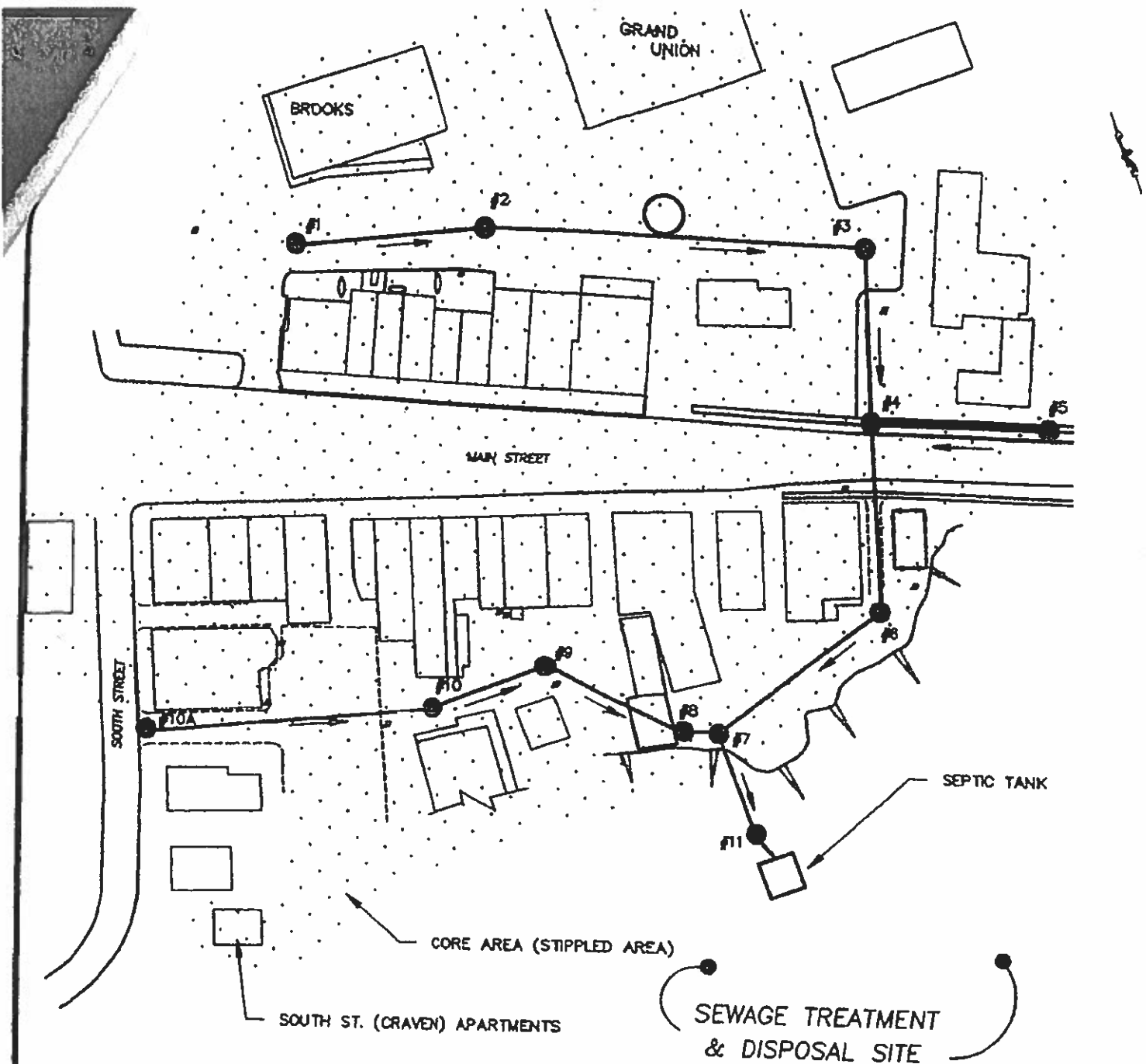


**Table 4**  
**Manhole Conditions - Bristol, Vermont - 2021**  
**Required Repairs and Maintenance Actions - #ID-9-0208-1A**

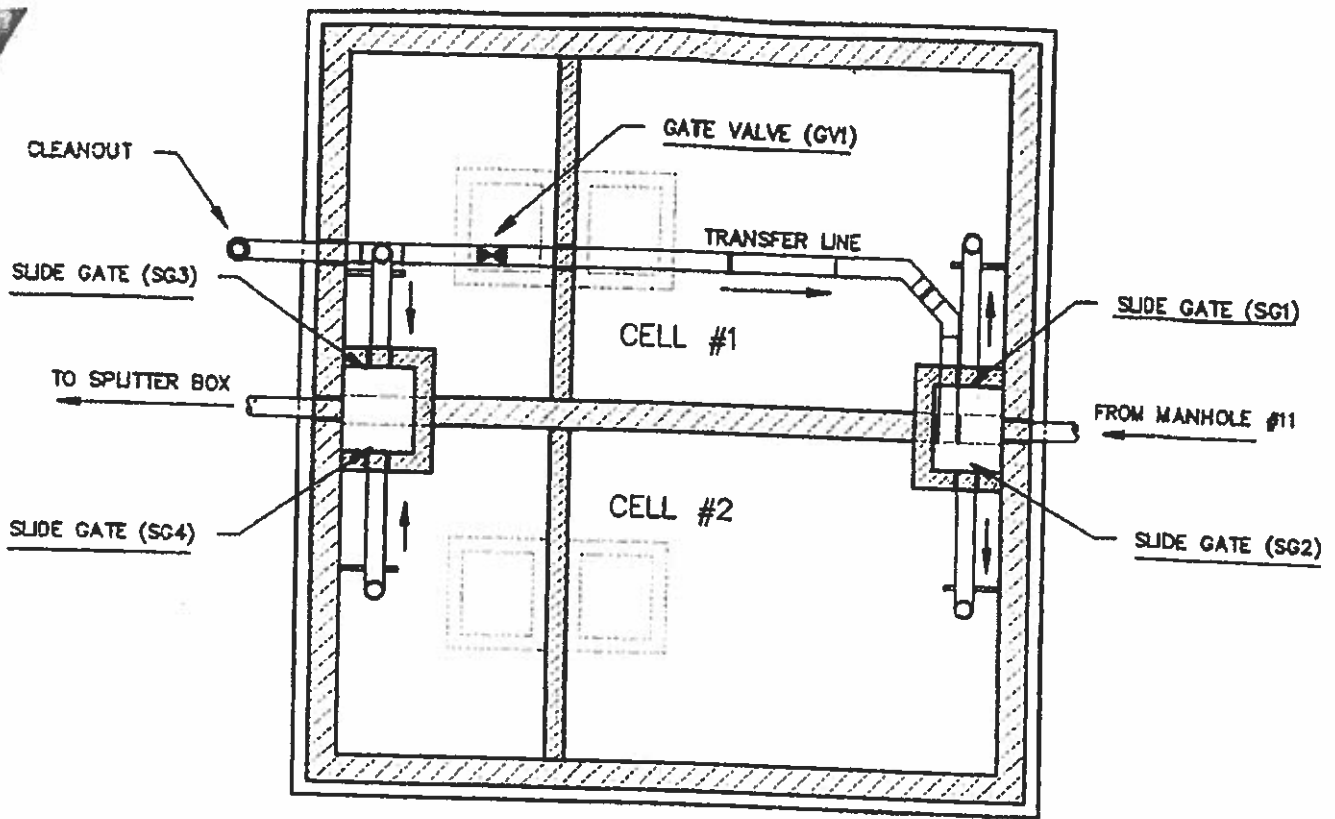
Manhole Number	Frame and cover				Clean invert	Clean shelves	Repair infiltration	Comments / additional items to repair
	Replace	Mortar	Center	Raise				
S.T. Inlet								
S.T. Outlet		x						grout needs repair, reset brick invert
Split box								Good condition - quarterly pumping
D.S.# 1								out of service
D.S.# 2								out of service
D.S.# 3								in service
D.S.# 4								out of service
D.S.# 5								in service
D.S.# 6								out of service
D.S.# 7								in service
D.S.# 8								in service
M.H.# 1								Good condition
M.H.# 2								Not Found
M.H.# 3								Good condition
M.H.# 4		x						Good condition, grout needs repair
M.H.# 5		x						Good condition, grout needs repair
M.H.# 6								Good condition
M.H.# 7								Not inspected
M.H.# 8								Excellent condition
M.H.# 9		x						Good condition, grout needs repair
M.H.# 10		x						Excellent condition, grout needs repair
M.H.# 10A		x						grout needs repair
M.H.# 11								Good condition
Mary's GT								Inactive - not inspected, vehicle parking
Hendee GT								Not inspected -pumping due
Snap's GT		x						Good cond. - pumping due, grout needs repair
Bakery GT								Good condition - pumping due
Cubbers GT								Good condition - pumping due
Viens D.S.								Good condition - siphon appears operational

# **APPENDIX B**

## **FIGURES**



OPERATION AND MAINTENANCE MANUAL VILLAGE OF BRISTOL, VERMONT CORE AREA SEWER IMPROVEMENTS		
SEWER SYSTEM FLOW SCHEMATIC		
GREEN MOUNTAIN ENGINEERING	4050 WILLISTON RD, SUITE 11 SOUTH BURLINGTON, VT 05403 FAX & PHONE: (802)862-558	
	CML WATER WASTEWATER	
DATE AUG. 1993	PROJECT NO. 2-009	FIGURE # 1



**SEPTIC TANK - PLAN VIEW**  
SCALE: NONE

OPERATION OF VALVES							
VALVE	NORMAL POSITION	O.O.	BY-PASS CELL #1	O.O.	BY-PASS CELL #2	O.O.	CLEAN TRANSFERLINE
SG1	OPEN	2	⊗ CLOSED ⊗		OPEN	2	⊗ CLOSED ⊗
SG2	CLOSED	1	⊗ OPEN ⊗		CLOSED	1	⊗ OPEN ⊗
SG3	CLOSED		CLOSED	1	⊗ OPEN ⊗		CLOSED
SG4	OPEN		OPEN	2	⊗ CLOSED ⊗		OPEN
GV1	OPEN	3	⊗ CLOSED ⊗	3	⊗ CLOSED ⊗		OPEN

⊗ ⊗ = DEVIATION FROM NORMAL POSITION

o.o. = ORDER OF OPERATION - WHEN PLACING VALVES IN OTHER THAN NORMAL POSITION, CHANGE POSITIONS IN THIS ORDER.

OPERATION AND MAINTENANCE MANUAL  
VILLAGE OF BRISTOL, VERMONT  
CORE AREA SEWER IMPROVEMENTS

**SEPTIC TANK FLOW SCHEMATIC**

**GREEN  
MOUNTAIN  
ENGINEERING**

4050 WILLISTON RD, SUITE 11  
SOUTH BURLINGTON, VT 0540.  
FAX & PHONE: (802)862-551

CIVIL  
WATER  
WASTEWATER

DATE  
AUG. 1993

PROJECT NO.  
2-009

FIGURE #  
2

## **APPENDIX C**

### **PART 1, SECTION D, ITEM #D2 OF DISCHARGE PERMIT**

C2. Construction Inspection:

The construction of the sewage collection, treatment and disposal system was completed in accordance with the approved plans and under the inspection of a Vermont Registered Professional Engineer.

On September 3, 1993, Brent Whitney, P.E., of Green Mountain Engineering provided certification that the construction and inspection of the subsurface disposal system was completed in accordance with the approved plans and specifications.

SECTION D "SYSTEM OPERATION"

D1. General Operating Requirements:

The sewage treatment and disposal system shall be operated at all times in a manner that will: (1) not permit the discharge of sewage onto the surface of the ground; (2) not result in the surfacing of sewage; (3) not result in the direct discharge of sewage into the waters of the State; (4) not result in a violation of the Vermont Water Quality Standards; and (5) not cause a Significant Alteration of the Aquatic Biota in the receiving waters.

In accordance with accepted design practices, the effluent disposal rate to the disposal fields shall not exceed 20,000 gallons per day except as may occur on an occasional basis during normal operation.

D2. Annual Inspection, Report and Implementation Schedule:

(A) Annual Inspection

Annually during the month of April, the permittee shall engage a Vermont Registered Professional engineer to make a thorough inspection, evaluation, and report of the complete sewage collection, treatment and disposal system. The engineer's inspection shall include, but not be limited to the following:

- a. inspecting the entire collection system, removing manhole covers to observe the condition of the sewers, grease interceptors, septic tanks, and manholes, and noting any signs of inflow or excess infiltration
- b. evaluating the accumulation of solids and sludge in both compartments of the septic tank and verifying the pumping of the septic tank
- c. evaluating the accumulation of grease in the grease interceptors and verifying cleaning of the interceptors, if necessary
- d. inspecting the evenness of distribution through the flow splitter box and making required adjustments

D2. Annual Inspection, Report and Implementation Schedule

(A) Annual Inspection (continued)

- e. verification of the proper operation of the dosing siphons;
- f. verifying the alternation of the fields;
- g. checking the depth of ponding in all shallow in-field observation wells;
- h. tabulating the groundwater level measurements made for the months of March and April (current year) and June and September (previous year); and
- i. noting any necessary repairs or maintenance that needs to be performed on the sewage collection, treatment, and disposal system.

(B) Annual Inspection Report

Before July 1<sup>st</sup> each year the permittee shall have a professional engineer submit an annual report including the following items:

- a. a complete list of the items inspected and the results of the inspection;
- b. an evaluation of the degree of ponding observed in the shallow in-field observation wells;
- c. an evaluation of the seasonal high groundwater level below the discosal fields; and
- d. a discussion of the recommended repairs and maintenance required

(C) Implementation Schedule

Before July 1<sup>st</sup> each year the permittee shall notify the Secretary in writing stating how the engineer's recommendations are to be implemented and including a schedule for the required repairs and maintenance.

D3. Septage Disposal

During the system's annual inspection the depth of sludge and scum shall be measured in all septic tanks. The septic tanks shall be pumped if: 1) the sludge is closer than twelve (12) inches to the outlet baffle or 2) the scum layer is closer than three (3) inches to the septic tank outlet baffle or 3) if otherwise recommended by the inspecting engineer. As part of the annual inspection report, the permittee's engineer shall supply the Secretary with the name and address of the pumpier and the municipal sewage treatment facility where the septage is to be disposed (or was) or other facility approved by the Secretary.

## **APPENDIX D**

### **TREATMENT FACILITY FLOW DATA**



User Description	Pres #	Prev #	Total Gal.	Current Da	Prev. Dat	Days	ADF	Limit	Exc?
10-12 MAIN STREET	139	137	2	5/11/2020	4/9/2020	32	63	799	no
BROWN-MCCLAY FUNERAL HOME	26	26	0	5/11/2020	4/9/2020	32	0	393	no
THREE MAIN LLC /(SIP N' SUDS)	253	247	6	5/11/2020	4/9/2020	32	188	458	no
WILLIAM & BERNADETTE VIENS	709	700	9	5/11/2020	4/9/2020	32	281	824	no
RITE AID	95	79	16	5/11/2020	4/9/2020	32	500	100	yes
WELLS MOUNTAIN LLC	68	67	1	5/11/2020	4/9/2020	32	31	100	no
IVAN HENDEE	1374	1351	23	5/11/2020	4/9/2020	32	719	2440	no
H & M MOUNTAIN ENTERPRISES	0	0	0	5/11/2020	4/9/2020	32	0	1180	no
FORAND, ERIC	206	203	3	5/11/2020	4/9/2020	32	94	271	no
ASA LIMITED/AARON THOMAS	55	55	0	5/11/2020	4/9/2020	32	0	119	no
TREEFORT LLC	51	51	0	5/11/2020	4/9/2020	32	0	100	no
CUBBER'S/ BEN & DREW	1058	1049	9	5/11/2020	4/9/2020	32	281	1025	no
SHEUN LAI POON	304	295	9	5/11/2020	4/9/2020	32	281	241	yes
WELLS MOUNTAIN LLC	321	315	6	5/11/2020	4/9/2020	32	188	769	no
VILLAGE CORNER STORE, LLC	81	80	1	5/11/2020	4/9/2020	32	31	519	no
TREEFORT LLC/BRISTOL BAKERY	833	828	5	5/11/2020	4/9/2020	32	156	829	no
WADE PROPERTIES LLC	211	206	5	5/11/2020	4/9/2020	32	156	174	no
FIVE MAIN VT. LLC/Bobcat	1124	1108	16	5/11/2020	4/9/2020	32	500	1492	no
KEITH, MICHAEL & SUSAN	110	108	2	5/11/2020	4/9/2020	32	63	580	no
JOHN MOYERS/GRISTMILL	208	205	3	5/11/2020	4/9/2020	32	94	732	no
ARTHUR CURCILLO	27	17	10	5/11/2020	4/9/2020	32	313	384	no
FOLKHEART/ PICKENS & SMITH	24	23	1	5/11/2020	4/9/2020	32	31	240	no
SHAWS	974	948	26	5/11/2020	4/9/2020	32	813	488	yes
JOHN MOYERS/(mazer)	45	44	1	5/11/2020	4/9/2020	32	31	183	no
ASMG/ 30 MAIN ST 7 UNITS	747	728	19	5/11/2020	4/9/2020	32	594	1199	no
ASMG/34 MAIN ST 3 UNITS	311	305	6	5/11/2020	4/9/2020	32	188	549	no
HART & WALKOVER	16	16	0	5/11/2020	4/9/2020	32	0	100	no
NATIONAL BANK OF MIDDLEBURY	43	42	1	5/11/2020	4/9/2020	32	31	149	no
SNAP'S RESTAURANT	693	689	4	5/11/2020	4/9/2020	32	125	1503	no
TYLER WESTBROOK	36	35	1	5/11/2020	4/9/2020	32	31	159	no
TOWN OF BRISTOL/HOLLEY HALL	64	63	1	5/11/2020	4/9/2020	32	31	100	no
BRISTOL REDEMPTION	81	79	2	5/11/2020	4/9/2020	32	63	241	no
JOHN MOYERS/ TRADING POST	339	331	8	5/11/2020	4/9/2020	32	250	604	no
FREDDIE B'S LLC	85	77	8	5/11/2020	4/9/2020	32	250	113	yes
Total Gallons:	10711	10507	204000	5/11/2020	4/9/2020				
Total ADF: (gallons/day)			6375						
April 2020									

System:  
4/9/20 - 4/20/21  
376 days  
13170 - 10507  
2663  
x 1,000  


---

2,663,000  
= 7082 gpd

User Description	Pres #	Prev #	Total Gal.	Current Da	Prev. Date	Days	ADF	Limit	Exc?
10-12 MAIN STREET	145	139	6	6/11/2020	5/11/2020	31	194	799	no
BROWN-MCCLAY FUNERAL HOME	26	26	0	6/11/2020	5/11/2020	31	0	393	no
THREE MAIN LLC /(SIP N' SUDS)	260	253	7	6/11/2020	5/11/2020	31	226	458	no
WILLIAM & BERNADETTE VIENS	718	709	9	6/11/2020	5/11/2020	31	290	824	no
WALGREENS	104	95	9	6/11/2020	5/11/2020	31	290	100	yes
WELLS MOUNTAIN LLC	69	68	1	6/11/2020	5/11/2020	31	32	100	no
IVAN HENDEE	1399	1374	25	6/11/2020	5/11/2020	31	806	2440	no
H & M MOUNTAIN ENTERPRISES	0	0	0	6/11/2020	5/11/2020	31	0	1180	no
MOYERS, JOHN (22 MAIN STREET)	208	206	2	6/11/2020	5/11/2020	31	65	271	no
ASA LIMITED/AARON THOMAS	55	55	0	6/11/2020	5/11/2020	31	0	119	no
TREEFORT LLC	52	51	1	6/11/2020	5/11/2020	31	32	100	no
CUBBER'S/ BEN & DREW	1067	1058	9	6/11/2020	5/11/2020	31	290	1025	no
SHEUN LAI POON	313	304	9	6/11/2020	5/11/2020	31	290	241	yes
WELLS MOUNTAIN LLC	327	321	6	6/11/2020	5/11/2020	31	194	769	no
VILLAGE CORNER STORE, LLC	84	81	3	6/11/2020	5/11/2020	31	97	519	no
TREEFORT LLC/BRISTOL BAKERY	839	833	6	6/11/2020	5/11/2020	31	194	829	no
WADE PROPERTIES LLC	216	211	5	6/11/2020	5/11/2020	31	161	174	no
FIVE MAIN VT. LLC/Bobcat	1132	1124	8	6/11/2020	5/11/2020	31	258	1492	no
KEITH, MICHAEL & SUSAN	112	110	2	6/11/2020	5/11/2020	31	65	580	no
JOHN MOYERS/GRISTMILL	211	208	3	6/11/2020	5/11/2020	31	97	732	no
ARTHUR CURCILLO	34	27	7	6/11/2020	5/11/2020	31	226	384	no
FOLKHEART/ PICKENS & SMITH	25	24	1	6/11/2020	5/11/2020	31	32	240	no
SHAWS	1010	974	36	6/11/2020	5/11/2020	31	1161	488	yes
JOHN MOYERS/(mazer)	49	45	4	6/11/2020	5/11/2020	31	129	183	no
ASMG/ 30 MAIN ST 7 UNITS	767	747	20	6/11/2020	5/11/2020	31	645	1199	no
ASMG/34 MAIN ST 3 UNITS	318	311	7	6/11/2020	5/11/2020	31	226	549	no
HART & WALKOVER	16	16	0	6/11/2020	5/11/2020	31	0	100	no
NATIONAL BANK OF MIDDLEBURY	44	43	1	6/11/2020	5/11/2020	31	32	149	no
SNAP'S RESTAURANT	699	693	6	6/11/2020	5/11/2020	31	194	1503	no
TYLER WESTBROOK	36	36	0	6/11/2020	5/11/2020	31	0	159	no
TOWN OF BRISTOL/HOLLEY HALL	64	64	0	6/11/2020	5/11/2020	31	0	100	no
BRISTOL REDEMPTION	82	81	1	6/11/2020	5/11/2020	31	32	241	no
JOHN MOYERS/ TRADING POST	346	339	7	6/11/2020	5/11/2020	31	226	604	no
FREDDIE B'S LLC	87	85	2	6/11/2020	5/11/2020	31	65	113	no
Total Gallons:	10914	10711	203000	6/11/2020	5/11/2020				
Total ADF: (gallons/day)			6548						
<b>May 2020 System Data</b>									

User Description	Pres #	Prev #	Total Gal.	Current Da	Prev. Date	Days	ADF	Limit	Exc?
10-12 MAIN STREET	146	145	1	7/10/2020	6/11/2020	29	34	799	no
BROWN-MCCLAY FUNERAL HOME	26	26	0	7/10/2020	6/11/2020	29	0	393	no
THREE MAIN LLC /(SIP N' SUDS)	269	260	9	7/10/2020	6/11/2020	29	310	458	no
WILLIAM & BERNADETTE VIENS	727	718	9	7/10/2020	6/11/2020	29	310	824	no
RITE AID	108	104	4	7/10/2020	6/11/2020	29	138	100	yes
WELLS MOUNTAIN LLC	74	69	5	7/10/2020	6/11/2020	29	172	100	yes
IVAN HENDEE	1424	1399	25	7/10/2020	6/11/2020	29	862	2440	no
H & M MOUNTAIN ENTERPRISES	0	0	0	7/10/2020	6/11/2020	29	0	1180	no
FORAND, ERIC	212	208	4	7/10/2020	6/11/2020	29	138	271	no
ASA LIMITED/AARON THOMAS	55	55	0	7/10/2020	6/11/2020	29	0	119	no
TREEFORT LLC	52	52	0	7/10/2020	6/11/2020	29	0	100	no
CUBBER'S/ BEN & DREW	1079	1067	12	7/10/2020	6/11/2020	29	414	1025	no
SHEUN LAI POON	323	313	10	7/10/2020	6/11/2020	29	345	241	yes
WELLS MOUNTAIN LLC	335	327	8	7/10/2020	6/11/2020	29	276	769	no
VILLAGE CORNER STORE, LLC	87	84	3	7/10/2020	6/11/2020	29	103	519	no
TREEFORT LLC/BRISTOL BAKERY	846	839	7	7/10/2020	6/11/2020	29	241	829	no
WADE PROPERTIES LLC	221	216	5	7/10/2020	6/11/2020	29	172	174	no
FIVE MAIN VT. LLC/Bobcat	1157	1132	25	7/10/2020	6/11/2020	29	862	1492	no
KEITH, MICHAEL & SUSAN	116	112	4	7/10/2020	6/11/2020	29	138	580	no
JOHN MOYERS/GRISTMILL	215	211	4	7/10/2020	6/11/2020	29	138	732	no
ARTHUR CURCILLO	44	34	10	7/10/2020	6/11/2020	29	345	384	no
FOLKHEART/ PICKENS & SMITH	25	25	0	7/10/2020	6/11/2020	29	0	240	no
SHAWS	1096	1010	86	7/10/2020	6/11/2020	29	2966	488	yes
JOHN MOYERS/(mazer)	51	49	2	7/10/2020	6/11/2020	29	69	183	no
ASMG/ 30 MAIN ST 7 UNITS	784	767	17	7/10/2020	6/11/2020	29	586	1199	no
ASMG/34 MAIN ST 3 UNITS	326	318	8	7/10/2020	6/11/2020	29	276	549	no
HART & WALKOVER	16	16	0	7/10/2020	6/11/2020	29	0	100	no
NATIONAL BANK OF MIDDLEBURY	44	44	0	7/10/2020	6/11/2020	29	0	149	no
SNAP'S RESTAURANT	711	699	12	7/10/2020	6/11/2020	29	414	1503	no
TYLER WESTBROOK	37	36	1	7/10/2020	6/11/2020	29	34	159	no
TOWN OF BRISTOL/HOLLEY HALL	65	64	1	7/10/2020	6/11/2020	29	34	100	no
BRISTOL REDEMPTION	85	82	3	7/10/2020	6/11/2020	29	103	241	no
JOHN MOYERS/ TRADING POST	356	346	10	7/10/2020	6/11/2020	29	345	604	no
FREDDIE B'S LLC	88	87	1	7/10/2020	6/11/2020	29	34	113	no
Total Gallons:	11200	10914	286000	7/10/2020	6/11/2020				
Total ADF: (gallons/day)			9862						
<b>June 2020 System Data</b>									





User Description	Pres #	Prev #	Total Gal.	Current Date	Prev. Date	Days	ADF	Limit	Exc?
10-12 MAIN STREET	150	149	1	10/15/2020	9/14/2020	32	31	799	no
BROWN-MCCLAY FUNERAL HOME	27	27	0	10/15/2020	9/14/2020	32	0	393	no
THREE MAIN LLC /(SIP N' SUDS)	300	288	12	10/15/2020	9/14/2020	32	375	458	no
WILLIAM & BERNADETTE VIENS	751	743	8	10/15/2020	9/14/2020	32	250	824	no
RITE AID	120	114	6	10/15/2020	9/14/2020	32	188	100	yes
WELLS MOUNTAIN LLC	81	80	1	10/15/2020	9/14/2020	32	31	100	no
IVAN HENDEE	1503	1475	28	10/15/2020	9/14/2020	32	875	2440	no
H & M MOUNTAIN ENTERPRISES	1	0	1	10/15/2020	9/14/2020	32	31	1180	no
FORAND, ERIC	224	219	5	10/15/2020	9/14/2020	32	156	271	no
ASA LIMITED/AARON THOMAS	57	56	1	10/15/2020	9/14/2020	32	31	119	no
TREEFORT LLC	53	53	0	10/15/2020	9/14/2020	32	0	100	no
CUBBER'S/ BEN & DREW	1116	1104	12	10/15/2020	9/14/2020	32	375	1025	no
SHEUN LAI POON	351	342	9	10/15/2020	9/14/2020	32	281	241	yes
WELLS MOUNTAIN LLC	375	365	10	10/15/2020	9/14/2020	32	313	769	no
VILLAGE CORNER STORE, LLC	98	94	4	10/15/2020	9/14/2020	32	125	519	no
TREEFORT LLC/BRISTOL BAKERY	869	861	8	10/15/2020	9/14/2020	32	250	829	no
WADE PROPERTIES LLC	241	233	8	10/15/2020	9/14/2020	32	250	174	yes
FIVE MAIN VT. LLC/Bobcat	1201	1194	7	10/15/2020	9/14/2020	32	219	1492	no
KEITH, MICHAEL & SUSAN	126	123	3	10/15/2020	9/14/2020	32	94	580	no
JOHN MOYERS/GRISTMILL	228	223	5	10/15/2020	9/14/2020	32	156	732	no
ARTHUR CURCILLO	76	70	6	10/15/2020	9/14/2020	32	188	384	no
FOLKHEART/ PICKENS & SMITH	27	27	0	10/15/2020	9/14/2020	32	0	240	no
SHAWS	1253	1231	22	10/15/2020	9/14/2020	32	688	488	yes
JOHN MOYERS/(mazer)	59	55	4	10/15/2020	9/14/2020	32	125	183	no
ASMG/ 30 MAIN ST 7 UNITS	847	824	23	10/15/2020	9/14/2020	32	719	1199	no
ASMG/34 MAIN ST 3 UNITS	348	340	8	10/15/2020	9/14/2020	32	250	549	no
HART & WALKOVER	16	16	0	10/15/2020	9/14/2020	32	0	100	no
NATIONAL BANK OF MIDDLEBURY	53	52	1	10/15/2020	9/14/2020	32	31	149	no
SNAP'S RESTAURANT	755	740	15	10/15/2020	9/14/2020	32	469	1503	no
TYLER WESTBROOK	40	39	1	10/15/2020	9/14/2020	32	31	159	no
TOWN OF BRISTOL/HOLLEY HALL	67	66	1	10/15/2020	9/14/2020	32	31	100	no
BRISTOL REDEMPTION	91	90	1	10/15/2020	9/14/2020	32	31	241	no
JOHN MOYERS/ TRADING POST	388	377	11	10/15/2020	9/14/2020	32	344	604	no
FREDDIE B'S LLC	91	90	1	10/15/2020	9/14/2020	32	31	113	no
Total Gallons:	11983	11760	223000	10/15/2020	9/14/2020				
Total ADF: (gallons/day)			6969						
<b>September 2020 System Data</b>									



User Description	Pres #	Prev #	Total Gal.	Current Date	Prev. Date	Days	ADF	Limit	Exc?
10-12 MAIN STREET	153	151	2	12/30/2020	11/13/2020	47	43	799	no
BROWN-MCCLAY FUNERAL HOME	28	28	0	12/30/2020	11/13/2020	47	0	393	no
THREE MAIN LLC /(SIP N' SUDS)	325	310	15	12/30/2020	11/13/2020	47	319	458	no
WILLIAM & BERNADETTE VIENS	761	756	5	12/30/2020	11/13/2020	47	106	824	no
WALGREENS	128	123	5	12/30/2020	11/13/2020	47	106	100	yes
WELLS MOUNTAIN LLC	87	82	5	12/30/2020	11/13/2020	47	106	100	yes
IVAN HENDEE	1561	1527	34	12/30/2020	11/13/2020	47	723	2440	no
H & M MOUNTAIN ENTERPRISES	11	4	7	12/30/2020	11/13/2020	47	149	1180	no
MOYERS, JOHN (22 MAIN STREET)	235	228	7	12/30/2020	11/13/2020	47	149	271	no
ASA LIMITED/AARON THOMAS	59	58	1	12/30/2020	11/13/2020	47	21	119	no
TREEFORT LLC	54	54	0	12/30/2020	11/13/2020	47	0	100	no
CUBBER'S/ BEN & DREW	1145	1128	17	12/30/2020	11/13/2020	47	362	1025	no
SHEUN LAI POON	374	360	14	12/30/2020	11/13/2020	47	298	241	yes
WELLS MOUNTAIN LLC	392	381	11	12/30/2020	11/13/2020	47	234	769	no
VILLAGE CORNER STORE, LLC	106	101	5	12/30/2020	11/13/2020	47	106	519	no
TREEFORT LLC/BRISTOL BAKERY	888	877	11	12/30/2020	11/13/2020	47	234	829	no
WADE PROPERTIES LLC	253	245	8	12/30/2020	11/13/2020	47	170	174	no
FIVE MAIN VT. LLC/Bobcat	1218	1208	10	12/30/2020	11/13/2020	47	213	1492	no
KEITH, MICHAEL & SUSAN	134	129	5	12/30/2020	11/13/2020	47	106	580	no
JOHN MOYERS/GRISTMILL	237	233	4	12/30/2020	11/13/2020	47	85	732	no
ARTHUR CURCILLO	92	82	10	12/30/2020	11/13/2020	47	213	384	no
FOLKHEART/ PICKENS & SMITH	28	28	0	12/30/2020	11/13/2020	47	0	240	no
SHAWS	1310	1273	37	12/30/2020	11/13/2020	47	787	488	yes
JOHN MOYERS/(mazer)	64	61	3	12/30/2020	11/13/2020	47	64	183	no
ASMG/ 30 MAIN ST 7 UNITS	909	871	38	12/30/2020	11/13/2020	47	809	1199	no
ASMG/34 MAIN ST 3 UNITS	367	355	12	12/30/2020	11/13/2020	47	255	549	no
HART & WALKOVER	17	16	1	12/30/2020	11/13/2020	47	21	100	no
NATIONAL BANK OF MIDDLEBURY	55	54	1	12/30/2020	11/13/2020	47	21	149	no
SNAP'S RESTAURANT	785	768	17	12/30/2020	11/13/2020	47	362	1503	no
TYLER WESTBROOK	44	42	2	12/30/2020	11/13/2020	47	43	159	no
TOWN OF BRISTOL/HOLLEY HALL	68	68	0	12/30/2020	11/13/2020	47	0	100	no
BRISTOL REDEMPTION	94	92	2	12/30/2020	11/13/2020	47	43	241	no
JOHN MOYERS/ TRADING POST	411	397	14	12/30/2020	11/13/2020	47	298	604	no
FREDDIE B'S LLC	93	92	1	12/30/2020	11/13/2020	47	21	113	no
Total Gallons:	12486	12182	304000	12/30/2020	8/13/2020				
Total ADF: (gallons/day)			6468						
<b>November 2020 System Data</b>									



User Description	Pres #	Prev #	Total Gal.	Current Date	Prev. Date	Days	ADF	Limit	Exc?
10-12 MAIN STREET	154	153	1	1/20/2021	12/30/2020	21	48	799	no
BROWN-MCCLAY FUNERAL HOME	28	28	0	1/20/2021	12/30/2020	21	0	393	no
THREE MAIN LLC /(SIP N' SUDS)	331	325	6	1/20/2021	12/30/2020	21	286	458	no
WILLIAM & BERNADETTE VIENS	767	761	6	1/20/2021	12/30/2020	21	286	824	no
RITE AID	129	128	1	1/20/2021	12/30/2020	21	48	100	no
WELLS MOUNTAIN LLC	96	87	9	1/20/2021	12/30/2020	21	429	100	yes
IVAN HENDEE	1580	1561	19	1/20/2021	12/30/2020	21	905	2440	no
H & M MOUNTAIN ENTERPRISES	15	11	4	1/20/2021	12/30/2020	21	190	1180	no
FORAND, ERIC	238	235	3	1/20/2021	12/30/2020	21	143	271	no
ASA LIMITED/AARON THOMAS	59	59	0	1/20/2021	12/30/2020	21	0	119	no
TREEFORT LLC	55	54	1	1/20/2021	12/30/2020	21	48	100	no
CUBBER'S/ BEN & DREW	1154	1145	9	1/20/2021	12/30/2020	21	429	1025	no
SHEUN LAI POON	380	374	6	1/20/2021	12/30/2020	21	286	241	yes
WELLS MOUNTAIN LLC	395	392	3	1/20/2021	12/30/2020	21	143	769	no
VILLAGE CORNER STORE, LLC	112	106	6	1/20/2021	12/30/2020	21	286	519	no
TREEFORT LLC/BRISTOL BAKERY	893	888	5	1/20/2021	12/30/2020	21	238	829	no
WADE PROPERTIES LLC	256	253	3	1/20/2021	12/30/2020	21	143	174	no
FIVE MAIN VT. LLC/Bobcat	1223	1218	5	1/20/2021	12/30/2020	21	238	1492	no
KEITH, MICHAEL & SUSAN	136	134	2	1/20/2021	12/30/2020	21	95	580	no
JOHN MOYERS/GRISTMILL	239	237	2	1/20/2021	12/30/2020	21	95	732	no
ARTHUR CURCILLO	96	92	4	1/20/2021	12/30/2020	21	190	384	no
FOLKHEART/ PICKENS & SMITH	28	28	0	1/20/2021	12/30/2020	21	0	240	no
SHAWS	1330	1310	20	1/20/2021	12/30/2020	21	952	488	yes
JOHN MOYERS/(mazer)	66	64	2	1/20/2021	12/30/2020	21	95	183	no
ASMG/ 30 MAIN ST 7 UNITS	926	909	17	1/20/2021	12/30/2020	21	810	1199	no
ASMG/34 MAIN ST 3 UNITS	372	367	5	1/20/2021	12/30/2020	21	238	549	no
HART & WALKOVER	17	17	0	1/20/2021	12/30/2020	21	0	100	no
NATIONAL BANK OF MIDDLEBURY	55	55	0	1/20/2021	12/30/2020	21	0	149	no
SNAP'S RESTAURANT	793	785	8	1/20/2021	12/30/2020	21	381	1503	no
TYLER WESTBROOK	45	44	1	1/20/2021	12/30/2020	21	48	159	no
TOWN OF BRISTOL/HOLLEY HALL	69	68	1	1/20/2021	12/30/2020	21	48	100	no
BRISTOL REDEMPTION	95	94	1	1/20/2021	12/30/2020	21	48	241	no
JOHN MOYERS/ TRADING POST	417	411	6	1/20/2021	12/30/2020	21	286	604	no
FREDDIE B'S LLC	94	93	1	1/20/2021	12/30/2020	21	48	113	no
Total Gallons:	12643	12486	157000	1/20/2021	12/30/2020				
Total ADF: (gallons/day)			7476						
<b>December 2020 System Data</b>									



User Description	Pres #	Prev #	Total Gal.	Current Da	Prev. Date	Days	ADF	Limit	Exc?
10-12 MAIN STREET	159	157	2	3/16/2021	2/11/2021	33	61	799	no
BROWN-MCCLAY FUNERAL HOME	28	28	0	3/16/2021	2/11/2021	33	0	393	no
THREE MAIN LLC /(SIP N' SUDS)	337	337	0	3/16/2021	2/11/2021	33	0	458	no
WILLIAM & BERNADETTE VIENS	771	771	0	3/16/2021	2/11/2021	33	0	824	no
WALGREENS	131	131	0	3/16/2021	2/11/2021	33	0	100	no
WELLS MOUNTAIN LLC	97	97	0	3/16/2021	2/11/2021	33	0	100	no
IVAN HENDEE	1601	1601	0	3/16/2021	2/11/2021	33	0	2440	no
H & M MOUNTAIN ENTERPRISES	20	20	0	3/16/2021	2/11/2021	33	0	1180	no
MOYERS, JOHN (22 MAIN STREET)	246	241	5	3/16/2021	2/11/2021	33	152	271	no
ASA LIMITED/AARON THOMAS	60	60	0	3/16/2021	2/11/2021	33	0	119	no
TREEFORT LLC	55	55	0	3/16/2021	2/11/2021	33	0	100	no
CUBBER'S/ BEN & DREW	1163	1163	0	3/16/2021	2/11/2021	33	0	1025	no
SHEUN LAI POON	387	387	0	3/16/2021	2/11/2021	33	0	241	no
WELLS MOUNTAIN LLC	399	399	0	3/16/2021	2/11/2021	33	0	769	no
VILLAGE CORNER STORE, LLC	114	114	0	3/16/2021	2/11/2021	33	0	519	no
TREEFORT LLC/BRISTOL BAKERY	897	897	0	3/16/2021	2/11/2021	33	0	829	no
WADE PROPERTIES LLC	260	260	0	3/16/2021	2/11/2021	33	0	174	no
FIVE MAIN VT. LLC/Bobcat	1230	1230	0	3/16/2021	2/11/2021	33	0	1492	no
KEITH, MICHAEL & SUSAN	139	139	0	3/16/2021	2/11/2021	33	0	580	no
JOHN MOYERS/GRISTMILL	242	242	0	3/16/2021	2/11/2021	33	0	732	no
ARTHUR CURCILLO	100	100	0	3/16/2021	2/11/2021	33	0	384	no
FOLKHEART/ PICKENS & SMITH	29	28	1	3/16/2021	2/11/2021	33	30	240	no
SHAWS	1347	1347	0	3/16/2021	2/11/2021	33	0	488	no
JOHN MOYERS/(mazer)	68	68	0	3/16/2021	2/11/2021	33	0	183	no
ASMG/ 30 MAIN ST 7 UNITS	944	944	0	3/16/2021	2/11/2021	33	0	1199	no
ASMG/34 MAIN ST 3 UNITS	377	377	0	3/16/2021	2/11/2021	33	0	549	no
HART & WALKOVER	17	17	0	3/16/2021	2/11/2021	33	0	100	no
NATIONAL BANK OF MIDDLEBURY	56	56	0	3/16/2021	2/11/2021	33	0	149	no
SNAP'S RESTAURANT	801	801	0	3/16/2021	2/11/2021	33	0	1503	no
TYLER WESTBROOK	46	46	0	3/16/2021	2/11/2021	33	0	159	no
TOWN OF BRISTOL/HOLLEY HALL	70	70	0	3/16/2021	2/11/2021	33	0	100	no
BRISTOL REDEMPTION	95	95	0	3/16/2021	2/11/2021	33	0	241	no
JOHN MOYERS/ TRADING POST	424	424	0	3/16/2021	2/11/2021	33	0	604	no
FREDDIE B'S LLC	95	95	0	3/16/2021	2/11/2021	33	0	113	no
Total Gallons:	12805	12797	8000	3/16/2021	2/11/2021				
Total ADF: (gallons/day)			242						
<b>February 2021 System Data</b>									



## **APPENDIX E**

# **DISCHARGE MONITORING RESULTS**



Bristol, Town of	
PO Box 249	070294
Bristol, VT 05443	
Atten: Cyrus Marsano	

PROJECT: Bristol Core Area Sewer  
 WORK ORDER: **2009-25766**  
 DATE RECEIVED: September 15, 2020  
 DATE REPORTED: September 24, 2020  
 SAMPLER: Jill Marsano

### Laboratory Report

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. All required method quality control elements including instrument calibration were performed in accordance with method requirements and determined to be acceptable unless otherwise noted.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields. The Williston, VT facility is also ISO/IEC 17025:2017 accredited for Total Coliform and E coli by SM9223B.

The NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

\_\_\_\_\_  
 Harry B. Locker, Ph.D.  
 Laboratory Director

**Laboratory Report**

DATE REPORTED: 09/24/2020

CLIENT: Bristol, Town of  
PROJECT: Bristol Core Area Sewer

WORK ORDER: 2009-25766  
DATE RECEIVED: 09/15/2020

001	Site: Splitter Box		Date Sampled: 9/15/20		Time: 9:45		
Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
pH per Client	6.79	SU at __C	Client Data	9/15/20 9:45	W CLI	N	
BOD-5day	490	mg/L	SM 5210B(11)	9/16/20 11:47	W JSS	A	
Chloride	74	mg/L	EPA 300.0	9/15/20 22:50	W TEL	A	
Nitrate as N	< 0.20	mg/L	EPA 300.0	9/15/20 22:50	W TEL	A	
Nitrite as N	< 0.20	mg/L	EPA 300.0	9/15/20 22:50	W TEL	A	
TKN	61	mg/L	EPA 351.2, R.2(1993)	9/21/20	N MAP	A	
Phosphorus, Total Dissolved	8.7	mg/L	SM20 4500 P-F	9/22/20 12:19	R RLS	A	
Solids, Total Suspended	86	mg/L	SM 2540 D-11	9/17/20	W JSS	A	
Oil & Grease	37.1	mg/L	EPA 1664A	9/22/20	W MTA	A	

002	Site: MW #3		Date Sampled: 9/15/20		Time: 9:55		
Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
pH per Client	6.86	SU at __C	Client Data	9/15/20 9:55	W CLI	N	
E. coli	< 1.0	MPN/100ml	SM 9223B(04)	9/15/20 13:53	W TEL	A	
Chloride	8.8	mg/L	EPA 300.0	9/15/20 23:10	W TEL	A	
Nitrate as N	0.16	mg/L	EPA 300.0	9/15/20 23:10	W TEL	A	
Phosphorus, Total Dissolved	0.006	mg/L	SM20 4500 P-F	9/22/20 12:21	R RLS	A	

003	Site: MW #4		Date Sampled: 9/15/20		Time: 10:00		
Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
pH per Client	6.80	SU at __C	Client Data	9/15/20 10:00	W CLI	N	
E. coli	1.0	MPN/100ml	SM 9223B(04)	9/15/20 13:53	W TEL	A	
Chloride	35	mg/L	EPA 300.0	9/15/20 23:30	W TEL	A	
Nitrate as N	5.1	mg/L	EPA 300.0	9/16/20 13:39	W TEL	A	
Phosphorus, Total Dissolved	0.009	mg/L	SM20 4500 P-F	9/22/20 12:23	R RLS	A	

Bristol Core Area Sewer

Endyne Inc. COC

2009-25766

Prepared: 5/29/20



Bill to: Pam Correia, Bristol, Town of, PO Box 249, Bristol VT 05443, Ph: (802)453-2410

Report to: Cyrus Marsano, Bristol, Town of, PO Box 249, Bristol VT 05443, town@bristolvt.org;info@vtums.com

Cust # 070, COREAREASEW, W-702

Bristol, Town of, Bristol Core Area Sewer

Splitter Box

Sampled Date/Time: 9/15/20 @ 9:45am Sampler: Jill Marsano

Table with 3 columns: Parameter, Container/Volume, and Limit. Includes pH Client Data (6.79 SU @ 20.2°C), Oil & Grease, Chloride, Nitrate as N, Nitrite as N, BOD-5day, Solids, Total Suspended, TKN, and Phosphorus, Total Dissolved.

MW #3

Sampled Date/Time: 9/15/20 @ 9:55am Sampler: Jill Marsano

Table with 3 columns: Parameter, Container/Volume, and Limit. Includes pH Client Data (6.86 SU @ 11.8°C), E. coli, Chloride, Nitrate as N, and Phosphorus, Total Dissolved.

MW #4

Sampled Date/Time: 9/15/20 @ 10:00am Sampler: Jill Marsano

Table with 3 columns: Parameter, Container/Volume, and Limit. Includes pH Client Data (6.80 SU @ 10.3°C), E. coli, Chloride, Nitrate as N, and Phosphorus, Total Dissolved.

Relinquished by: [Signature] 9/15/20 11:57am Date Time

Accepted by: [Signature] Date Time

Relinquished by: [Signature] Date Time

Received by: [Signature] 9/15/20 11:55 Date Time

Sites/Parameters correct as listed. Client Initials

Client Authorization to use Subcontract lab Client Initials

Sample origin: VT NH NY Other

Special reporting instructions: (PO#)

Requested Turnaround Time: Routine: Rush Due Date

Delv: Client, Temp C: 2.7, Tmpl Ck, Log by, Lab use Only, Comment:

Aqueous samples requiring metals testing require acid preservation for a 24 hr period prior to analysis.



160 James Brown Dr. Williston, VT 05495 Ph 802-879-4333 Fax 802-879-7103

56 Etna Road Lebanon, NH 03766 Ph 603-678-4891 Fax 603-678-4893

315 New York Rd. Plattsburgh, NY 12903 Ph 518-563-1720 Fax 518-563-0052





Bristol, Town of  
PO Box 249 070294  
Bristol, VT 05443  
Atten: Cyrus Marsano

PROJECT: Bristol Core Area Sewer  
WORK ORDER: **2006-14725**  
DATE RECEIVED: June 18, 2020  
DATE REPORTED: July 06, 2020  
SAMPLER: Jill Marsano

### Laboratory Report

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. All required method quality control elements including instrument calibration were performed in accordance with method requirements and determined to be acceptable unless otherwise noted.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields. The Williston, VT facility is also ISO/IEC 17025:2017 accredited for Total Coliform and E coli by SM9223B.

The NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Harry B. Locker, Ph.D.  
Laboratory Director

**Laboratory Report**

DATE REPORTED: 07/06/2020

CLIENT: Bristol, Town of  
PROJECT: Bristol Core Area Sewer

WORK ORDER: 2006-14725  
DATE RECEIVED: 06/18/2020

001	Site: Splitter Box			Date Sampled: 6/18/20		Time: 12:15	
Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
pH per Client	6.20	SU at __C	Client Data	6/18/20 12:15	W CLI	N	
BOD-5day	560	mg/L	SM 5210B(11)	6/19/20 11:39	W JSS	A	
Chloride	69	mg/L	EPA 300.0	6/18/20 23:57	W TEL	A	
Nitrate as N	< 0.20	mg/L	EPA 300.0	6/18/20 23:57	W TEL	A	
Nitrite as N	0.22	mg/L	EPA 300.0	6/18/20 23:57	W TEL	A	
TKN	63	mg/L	EPA 351.2, R.2(1993)	7/1/20 16:44	N MAP	A	
Phosphorus, Total Dissolved	8.6	mg/L	SM20 4500 P-F	6/23/20 14:58	R LPJ	A	
Solids, Total Suspended	70	mg/L	SM 2540 D-11	6/24/20	W JSS	A	
Oil & Grease	32.3	mg/L	EPA 1664A	6/26/20	W MTA	A	

002	Site: MW #3			Date Sampled: 6/18/20		Time: 11:49	
Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
pH per Client	6.75	SU at __C	Client Data	6/18/20 11:49	W CLI	N	
E. coli	< 1.0	MPN/100ml	SM 9223B(04)	6/18/20 15:50	W TEL	A	
Chloride	7.4	mg/L	EPA 300.0	6/19/20 0:17	W TEL	A	
Nitrate as N	1.3	mg/L	EPA 300.0	6/19/20 0:17	W TEL	A	
Phosphorus, Total Dissolved	0.008	mg/L	SM20 4500 P-F	6/23/20 15:00	R LPJ	A	

003	Site: MW #4			Date Sampled: 6/18/20		Time: 11:51	
Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
pH per Client	6.65	SU at __C	Client Data	6/18/20 11:51	W CLI	N	
E. coli	1.0	MPN/100ml	SM 9223B(04)	6/18/20 15:50	W TEL	A	
Chloride	27	mg/L	EPA 300.0	6/19/20 0:37	W TEL	A	
Nitrate as N	3.3	mg/L	EPA 300.0	6/19/20 4:17	W TEL	A	
Phosphorus, Total Dissolved	0.016	mg/L	SM20 4500 P-F	6/23/20 15:02	R LPJ	A	

Bristol Core Area Sewer

Endyne Inc. COC

Prepared: 5/29/20

2008-14725



2008-14725

Bill to: Pam Correia, Bristol, Town of, PO Box 249, Bristol VT 05443, Ph: (802)453-2410

Report to: Cyrus Marsano, Bristol, Town of, PO Box 249, Bristol VT 05443, town@bristolvt.org;info@vtums.com

Cust # 0702

COREAREASEWE

W-70294

Bristol, Town of, Bristol Core Area Sewer

Splitter Box

Sampled Date/Time: 6/18/20 @ 12:15 pm Sampler: Jill Marsano

Table with 3 columns: Parameter, Container, and Notes. Rows include pH Client Data (6.20 su @ 25.7°C), Oil & Grease, Chloride, Nitrate as N, Nitrite as N, BOD-5day, Solids, Total Suspended, TKN, and Phosphorus, Total Dissolved.

MW #3

Sampled Date/Time: 6/18/20 @ 11:49 am Sampler: Jill Marsano

Table with 3 columns: Parameter, Container, and Notes. Rows include pH Client Data (6.75 su @ 17.3°C), E. coli, Chloride, Nitrate as N, and Phosphorus, Total Dissolved.

MW #4

Sampled Date/Time: 6/18/20 @ 11:51 am Sampler: Jill Marsano

Table with 3 columns: Parameter, Container, and Notes. Rows include pH Client Data (6.65 su @ 16.4°C), E. coli, Chloride, Nitrate as N, and Phosphorus, Total Dissolved.

Relinquished by: [Signature] 6/18/20 1:42 pm Accepted by: [Signature] Date Time

Relinquished by: [Signature] Date Time Received by: [Signature] 6/18/20 13:43 Date Time

Sites/Parameters correct as listed. Client Initials

Client Authorization to use Subcontract lab Client Initials

Sample origin: VT NH NY Other

Special reporting instructions: (PO#)

Requested Turnaround Time: Routine: Rush Due Date

Delv: Client, Temp C: 4.0, Tmpl Ck, Lab use Only, Log by, Comment

Aqueous samples requiring metals testing require acid preservation for a 24 hr period prior to analysis.



160 James Brown Dr. Williston, VT 05495 Ph 802-879-4333 Fax 802-879-7103

56 Etna Road Lebanon, NH 03766 Ph 603-678-4891 Fax 603-678-4893

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