DESIGN REPORT
PROPOSED WASTEWATER

FOR

Buttermilk Falls

PROPOSED
Hotel and Resort Expansion

SITUATE:

North Road

Town of Marlborough
Ulster County, NY

TOTAL ACREAGE OF SITE: ±62.0 AC

OWNER / APPLLICANT:
220 Road L.L.C / Robert Pollock
220 North Road
Milton NY, 12547

DATE:
March 14, 2024

PREPARED BY:

MEDENBACH EGGERS & CARR
CIVIL ENGINEERING AND LAND SURVEYING, P.C.
STONE RIDGE, NY 12484
(845) 687-0047

STATE OF NEW YORK
BARRY MEDENBACH
LICENSED PROFESSIONAL ENGINEER

Barry Medenbach

BARRY MEDENBACH, P.E., LIC. NO. 60142

TABLE OF CONTENTS:

1. General Description:

Buttermilk Falls is an existing Bed and Breakfast facility with a restaurant known as Henry's and Spa, banquet hall, and accessory facilities situated on 50.7 acres overlooking the Hudson River on east side of North Road in Milton New York.

The proposal is to add a 65-room hotel, 35 individual cabins, 60 seat restaurant and 300 seat banquet hall, among other accessory facilities. This will include adding 5.3 adjacent acres to the main parcel and 6 acres on the west side of North Road on corner of Mahoney Road for parking. Total Site area is 62.0 acres.

The main hotel building will be located on top of a hilltop overlooking the Hudson River with the restaurant and banquet hall attached. The cabins will be situated in a wooded area to the north with some on piers to protect the old growth trees. Two existing single-family homes with access from VanOrden Road and Two on North Road will remain for workforce housing. The proposed parking lot on the west side of North Road contains an existing warehouse type building portion to be removed and balance renovated for facility storage and deliveries.

2. Public Water Supply

The existing facility has existing public water from the town on site with fire hydrants. The proposed facilities will connect to the existing water main on site and extend the 6" water main through the site and connect to the existing water main on Van Orden Road. Two additional Fire Hydrants will be provided on site to serve the new facilities.

The increase in water usage will be 16,800 gpd based on NY Dept of Health usage requirements.

3. Sewage Disposal

A portion of the existing facilities is connected to the Milton Sewer district for "Henry's Restaurant" and the Buttermilk Falls Inn & Spa.

Design Flows on Town of Marlborough Milton Sewer:

Existing Facilities:		**To Town Sewer**
Bed and Breakfast rooms	14 rooms @110 gpd	= 1,540 gpd
Henry's Restaurant	120 seats @28 gpd	= 3,360 gpd
Existing Total to Town Sewer		**= 4,900 gpd**

4. Existing Onsite Waste Water Disposal

Other existing sewage includes three existing onsite septic systems with existing SPDES permits, as follows.

Outfall #1	= 1,342 gpd
Outfall #2	= 100 gpd
Outfall #3	= 1,920 gpd
Total Onsite Septic	**= 3,362 gpd**

Existing SPDES Permit for INN at BUTTERMILK FARMS

DEC Permit ID: 3-5136-00094/00001

SPDES ID: NYG000782

5. Proposed Onsite Waste Water Disposal

For the proposed system, Outfalls #4 and #5 are designed with an alternating dose gravity absorption bed septic system.

Outfall #4	= 7,150 gpd
Outfall #5	= 4,920 gpd
Outfall #6	= 4,730 gpd
Total Proposed for Onsite Septic	**=16,800 gpd**
Total Onsite Facility Outfalls 1-6	**=20,162 gpd**

6. Design Data

Outfall #4

This system consists of two septic tanks with gravity flow from the building and then a pump duplex station that alternated the flow to two disposal bed systems.

Average Daily Flow for Hotel, 65 rooms @110 gpd = 7,150 gpd

Absorption Bed Design

Proposes 2 septic tanks in series

- One (1) 6,000 gal and one (1) 3,000 gal
- Ten (10) disposal beds 20'x65'

STABILIZED PERCOLATION RATE	20 MIN./INCH
APPLICATION RATE	0.55 GPD/SQ. FT.
REQUIRED ABSORPTION AREA	7150 gpd/0.55 gpd/sq. ft.= 13,000 SQ. FT.

PROVIDE (10) BEDS @20 FT x 65 FT (5 per dosing system)= 13,000 SQ. FT.

PUMPING/DOSING VOLUME FOR DUPLUX PUMPING STATION

FORCE MAIN PIPE VOLUME: 640 FT OF 1-1/2" PIPE x 0.0918 GALS/FT

= 59 GALS

TOTAL LATERAL PIPE VOLUME

(4) LATS @65 FT = 260 FT; (5) BEDS @260 FT= 1,300 FT OF LATERALS

1300 FT x 0.653 GALS/FT= 849 GALS

DOSING VOLUME FOR DUPLUX PUMPING STATION

849 GALS x 75% = 637 GALS + 59 GALS(F.M.)	= 696 GALS MIN
849 GALS x 85% = 722 GALS + 59 GALS(F.M.)	= 781 GALS MAX
PROVIDED VOLUME	= 751 GAL

Outfall #5

This system consists of two septic tanks with gravity flow from the building, a grease trap for kitchen waste and then a duplex pump station that alternated the flow to two disposal bed systems.

Average Daily for Proposed Restaurant, Banquet Hall and Employees

Restaurant	60 seats @28 gpd	= 1,680 gpd
Banquet Hall	300 seats @8 gpd	= 2,400 gpd
Employees	70 @12 gpd	= 840 gpd
Total Proposed for Outfalls #5		**= 4,920 gpd**

Absorption Bed Design

Proposes 2 septic tanks in series.

- One (1) 5,200 gal and one (1) 2,800 gal, (1) 2,000 gal grease trap

- Six (6) disposal beds 20'x75'

STABILIZED PERCOLATION RATE 20 MIN./INCH

APPLICATION RATE 0.55 GPD/SQ. FT.

REQUIRED ABSORPTION AREA; 4920 gpd/0.55 gpd/sq. ft.= 8945 SQ. FT.

PROVIDE (6) BEDS @20 FT x 75 FT = 9000 SQ. FT.

PUMPING/DOSING VOLUME FOR DUPLUX PUMPING STATION

FORCE MAIN PIPE VOLUME; 535 FT OF 1-1/2" PIPE x 0.0918 GALS/FT

= 49 GALS

TOTAL LATERAL PIPE VOLUME

(4) LATS @75 FT = 300 FT

(3) BEDS @300 FT = 900 FT OF LATERALS

900 FT x 0.653 GALS/FT = 588 GALS

DOSING VOLUME FOR DUPLUX PUMPING STATION

588 GALS x 75% = 441 GALS + 49 GALS(F.M.) = 490 GALS MIN

588 GALS x 85% = 500 GALS + 49 GALS(F.M.) = 549 GALS MAX

PROVIDED VOLUME = 532 GALS

Outfall #6 Design Data for Proposed Cabins

Outfall #6 is designed with a low pressure force main sewer system with grinder pumps that each service two cabins. Each grinder pump will discharge to a low pressure force main system that delivers the wastewater to two septic tanks and then a duplex pump station that alternates the flow to disposal ed systems.

Average Daily Flow for Cabins

35 Cabins @110 gpd/br; 27 one bedrooms and 8 two bedrooms = 4,730 gpd

Absorption Bed Design

Proposes 2 septic tanks in series

- One (1) 5,200 gal and one (1) 2,800 gal
- Six (6) disposal beds 20'x75'

STABILIZED PERCOLATION RATE 20 MIN./INCH

APPLICATION RATE 0.55 GPD/SQ. FT.

REQUIRED ABSORPTION AREA; 4730 gpd/0.55 gpd/sq. ft.= 8600 SQ. FT.

PROVIDE (6) BEDS (3 per dosing system) @20 FT x 75 FT = 9000 SQ. FT.

PUMPING/DOSING VOLUME FOR DUPLUX PUMPING STATION

FORCE MAIN PIPE VOLUME ; 140 FT OF 1-1/2" PIPE x 0.0638 GALS/FT = 9 GALS

TOTAL LATERAL PIPE VOLUME

(4) LATS @75 FT	= 300 FT
(3) BEDS @300 FT	= 900 FT OF LATERALS
900 FT x 0.653 GALS/FT	= 588 GALS

DOSING VOLUME FOR DUPLUX PUMPING STATION

588 GALS x 75% = 441 GALS + 9 GALS(F.M.)	= 450 GALS MIN
588 GALS x 85% = 500 GALS + 9 GALS(F.M.)	= 509 GALS MAX
PROVIDED VOLUME	= 501 GALS

Appendix A

Buttermilk Falls, NY
Rev. 1

Prepared by : D. Benson **On:** February 15, 2024

Notes :
Analysis based upon drawings and data provided. Station recommendations are preliminary.

GPD values impact retention times only, not line sizing or hydraulics. GP laterals to be 1.25".

Analysis valid only with pipe type listed.

General recommendations for valve placement are: clean out valves at intervals of approximately 1,000 ft and at branch ends and junctions; isolation valves at branch junctions; and air release valves at changes in grade of 20 to 25 ft or more and/or at intervals of 2,000 to 2,500 ft. Lateral kits comprised of a ball and check valve are required to be installed between the pump discharge and street main on all installations. Laterals should be located as close to the public right of way as possible.

Quantities of grinder pumps, pipe, and valves are indicated on the cost page. The model of grinder pump(s) indicated is based upon the initial information provided to us but may not be the most appropriate for the specific location or requirements of the project. Costs of these items and their installation are best obtained from sources in your region. We recommend you contact your local distributor of Environment One products for additional recommendations.

07.28.2023 - Initial analysis - Use total daily flow provided to us. 220GPD for each cabin labeled C and 110GPD for the remainder of the cabins.

02.15.2024 - Rev. 1 - Adjust layout according to provided PDF. DH071 station choice for single cabin connections. DH151 station selection to serve multiple cabins.

<<<<< E N D O F N O T E S >>>>>

PRELIMINARY PRESSURE SEWER - PIPE SIZING AND BRANCH ANALYSIS

Prepared By:
D. Benson

Buttermilk Falls, NY
Rev. 1

February 15, 2024

Zone Number	Connects to Zone	Number of Pumps in Zone	Accum Pumps in Zone	Gals/day per Pump	Max Flow Per Pump (gpm)	Max Sim Ops	Max Flow (GPM)	Pipe Size (inches)	Max Velocity (FPS)	Length of Main this Zone	Friction Loss Factor (ft/100 ft)	Friction Loss This Zone	Accum Fric Loss (feet)	Max Main Elevation	Minimum Pump Elevation	Static Head (feet)	Total Dynamic Head (ft)
This spreadsheet was calculated using pipe diameters for: SDR11HDPE											Friction loss calculations were based on a Constant for inside roughness "C" of: 150						
1.00	3.00	2	2	220	11.00	2	22.00	2.00	2.38	210.00	1.19	2.50	11.52	168.00	158.00	10.00	21.52
2.00	3.00	2	2	330	11.00	2	22.00	2.00	2.38	246.00	1.19	2.92	11.94	168.00	148.00	20.00	31.94
3.00	5.00	0	4	200	11.00	3	33.00	2.00	3.57	184.00	2.52	4.64	9.02	168.00	168.00	0.00	9.02
4.00	5.00	4	4	358	11.00	3	33.00	2.00	3.57	450.00	2.52	11.34	15.72	168.00	140.00	28.00	43.72
5.00	9.00	1	9	220	11.00	3	33.00	2.00	3.57	155.00	2.52	3.91	4.38	166.00	164.00	2.00	6.38
6.00	7.00	3	3	220	11.00	2	22.00	2.00	2.38	265.00	1.19	3.15	9.29	168.00	158.00	10.00	19.29
7.00	9.00	3	6	220	11.00	3	33.00	2.00	3.57	225.00	2.52	5.67	6.14	168.00	164.00	4.00	10.14
8.00	9.00	2	2	275	11.00	2	22.00	2.00	2.38	262.00	1.19	3.12	3.59	166.00	160.00	6.00	9.59
9.00	9.00	0	17	200	11.00	4	44.00	3.00	2.19	72.00	0.65	0.47	0.47	162.00	162.00	0.00	0.47

Note: This analysis is valid only with the use of progressive cavity type grinder pumps as manufactured by Environment One.

PRELIMINARY PRESSURE SEWER - ACCUMULATED RETENTION TIME (HR)

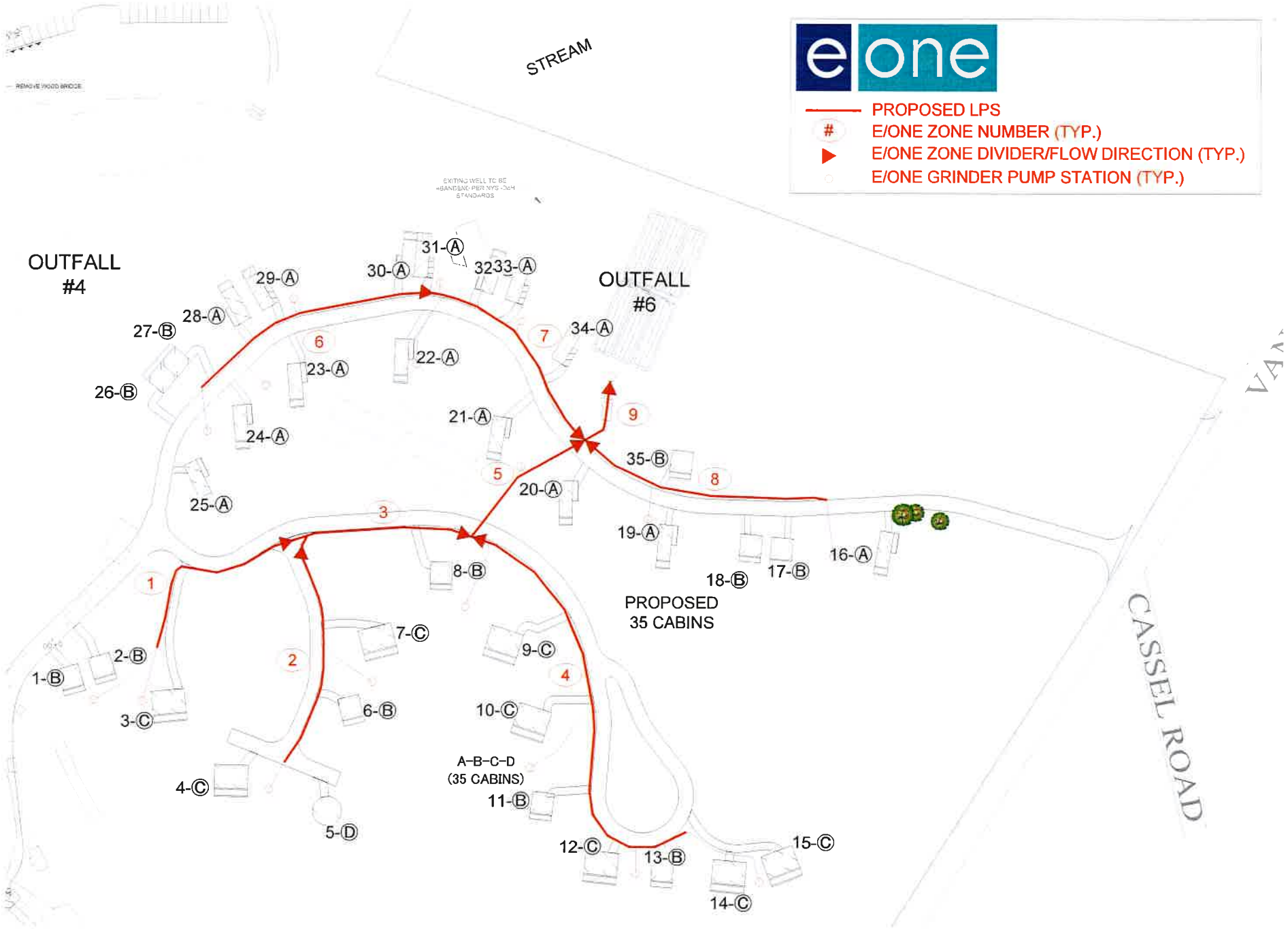
Prepared By:
D. Benson

Buttermilk Falls, NY
Rev. 1

February 15, 2024

Zone Number	Connects to Zone	Accumulated Total of Pumps this Zone	Pipe Size (inches)	Gallons per 100 lineal feet	Length of Zone	Capacity of Zone	Average Daily Flow	Average Fluid Changes per Day	Average Retention Time (Hr)	Accumulated Retention Time (Hr)
This spreadsheet was calculated using pipe diameters for: SDR11HDPE								Gals per Day per Dwelling		200
1.00	3.00	2	2.00	15.40	210.00	32.35	440	13.60	1.76	2.72
2.00	3.00	2	2.00	15.40	246.00	37.89	660	17.42	1.38	2.33
3.00	5.00	4	2.00	15.40	184.00	28.34	1,100	38.81	0.62	0.95
4.00	5.00	4	2.00	15.40	450.00	69.31	1,432	20.66	1.16	1.49
5.00	9.00	9	2.00	15.40	155.00	23.87	2,752	115.27	0.21	0.33
6.00	7.00	3	2.00	15.40	265.00	40.82	660	16.17	1.48	2.24
7.00	9.00	6	2.00	15.40	225.00	34.66	1,320	38.09	0.63	0.76
8.00	9.00	2	2.00	15.40	262.00	40.36	550	13.63	1.76	1.89
9.00	9.00	17	3.00	33.47	72.00	24.10	4,622	191.82	0.13	0.13

Note: This analysis is valid only with the use of progressive cavity type grinder pumps as manufactured by Environment One


e one
PROPOSED LPS
E/ONE ZONE NUMBER (TYP.)
E/ONE ZONE DIVIDER/FLOW DIRECTION (TYP.)
E/ONE GRINDER PUMP STATION (TYP.)
STREAM
OUTFALL #4
OUTFALL #6
PROPOSED 35 CABINS
A-B-C-D (35 CABINS)
CASSEL ROAD
1-Ⓑ
2-Ⓑ
3-Ⓒ
4-Ⓒ
5-Ⓓ
6-Ⓑ
7-Ⓒ
8-Ⓑ
9-Ⓒ
10-Ⓒ
11-Ⓑ
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30-Ⓐ
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Appendix B

PERMIT
Under the Environmental Conservation Law (ECL)

GENERAL PERMIT GP-0-05-001
Discharge of 1,000 - 10,000 gpd to Groundwater

Permittee and Facility Information

Permit Issued To:
INN AT BUTTERMILK FALLS EVENTS LLC
PO BOX 444
MILTON, NY 12547-0444
(971) 834-0775

Facility:
INN AT BUTTERMILK FALLS
220 NORTH RD
MILTON, NY 12547

Applicable DEC Region(s): ALL
General Permit Authorized Activity: A discharge to groundwater of 1,000 to 10,000 gallons per day of treated sanitary waste, without the admixture of industrial wastes, from on-site treatment works serving private, commercial, and institutional facilities using treatment units or processes referenced in Design Standards for Wastewater Treatment Works - Intermediate Size Sewerage Facilities (NYSDEC, 1988), or for facilities in the Lake George Basin, referenced in Design Standards for Wastewater Treatment Works in the Lake George Basin (NYSDEC, 1989).

Facilities serving, or intended to serve, more than one separately owned property can only be authorized to a government agency, municipality, or sewage disposal corporation formed and regulated pursuant to Article 10 of the Transportation Corporations Law.

Exclusions: Activities excluded from this General Permit are facilities in special (100-year) flood hazard areas as defined in 42 United States Code 4001; freshwater and tidal wetlands and their adjacent areas as defined in ECL Articles 24 and 25, respectively; coastal erosion hazard areas as defined in ECL Article 34; wild, scenic, and recreational river corridors as defined in ECL Article 15, Title 27; or facilities located in the counties of Kings, Nassau, Queens and Suffolk not previously authorized by GP 95-01.

Facility Location: in MARLBOROUGH in ULSTER COUNTY
Facility Principal Reference Point: NYTM-E: 587.07 NYTM-N: 4613.31
Project Location: Buttermilk Falls Inn and Spa, and the Catering Kitchen/Banquet Hall Building

Specific Activities Authorized for this Permit: This permit authorizes the subsurface discharge of treated sanitary waste, without the admixture of industrial wastes, from:

- Outfall 001 - design flow of 1,342 gallons per day (gpd)
- Outfall 002 - design flow of 100 gpd, and
- Outfall 003 - design flow of 1,920 gpd..

in accordance with plans prepared by Medenbach and Eggers dated December 22, 2005, correspondence resubmitted January 20, 2006, and plan dated June 11, 2013.

Permit Authorizations

P/C/I SPDES- Groundwater Discharge - Under Article 17, Titles 7 & 8
Permit ID 3-5136-00094/00001 (SPDES ID NYG000782)

Renewal	Effective Date: 3/1/2006	Expiration Date: 5/10/2015
Modification # 1	Effective Date: 8/22/2013	Expiration Date: 5/10/2015

NYSDEC Approval

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.

General Permit Authorized by
Permit Administrator: WILLIAM R ADRIANCE , Chief Permit Administrator
Address: NYSDEC HEADQUARTERS
625 BROADWAY
ALBANY, NY 12233

Date: 05/11/2005

This permit is not effective without the signature below:

Validation under this General Permit
Authorized By: DANIEL T WHITEHEAD , Deputy Regional Permit Administrator
Address: NYSDEC REGION 3 HEADQUARTERS
21 SOUTH PUTT CORNERS RD
NEW PALTZ, NY 12561-1620

Authorized Signature: Daniel T Whitehead Date 8/22/2013

Distribution List

S. Karimipour/E. Shirkey, DOW- White Plains
V. Gandhi, DOW-New Paltz
C. Jamison, Coordinator, Bureau of Water Permits
Ulster County Health Dept.
B. Medenbach, P.E.

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Application for State Pollutant Discharge Elimination System (SPDES) General Permit GP-0-15-001

Groundwater Discharge of Treated Sanitary Sewage

Applicant Name 220 North Road Realty LLC | **Telephone** 718-834-0275 | **Email** RobtPollock@GMail.com

Mailing Address c/o Robert Pollock PO Box 444 | **City** Milton | **State** NY | **Zip** 12547

Applicant must be (check all that apply). [✓] Owner [ ] Operator [ ] Lessee

Taxpayer ID (if applicant is NOT an individual) 14-183 2212

Project / Facility Name Buttermilk Falls Resort

Project Location - street address, if applicable, or provide directions and distances to roads, bridges and bodies of water

220 North Road Milton NY 12547

Property Tax Map Section / Block / Lot Number 103.1-2-12.200 | Proposed Start Date 2025 | Estimated Completion Date 2027

Town / Village / City Town of Marlborough | County Ulster

If you are able, provide Location Coordinates. Enter NYTMs in kilometers OR Latitude/Longitude in degrees, minutes, seconds

NYTM - E 587.03 | NYTM - N 4613.21 | Latitude | Longitude

Outfall # 1 [✓] Existing [ ] Proposed | To Add/Remove outfalls, click +/- button

Design Flow in gpd (current or expected) 1,342 gpd

If previously covered by an individual SPDES permit, provide permit number NY 3-5186-00094/00001

Type of Standard On-Site Treatment: Septic Tanks with -

- [✓] Absorption Trenches
- [ ] Cut and Fill Systems
- [ ] Shallow Absorption Trenches
- [ ] Raised Systems
- [ ] Absorption Beds
- [ ] Seepage Pits

Type of Alternative On-Site Treatment: Septic Tanks with -

- [ ] Absorption Trenches Using An Alternative Aggregate
- [ ] Single-Pass Sand Filters & Pressurized Shallow Narrow Drainfields
- [ ] Shallow Absorption Trenches Using An Alternate Aggregate
- [ ] Mound Systems
- [ ] Absorption Beds Using An Alternative Aggregate
- [ ] Drip Dispersal or Other Low Profile Dispersal System

Note: Alternative aggregate may need a Beneficial Use Determination (BUD)

Note: Gravelless (aggregate-free) products may be used in certain Standard or Alternative systems as described in the Design Standards

Certification

By my signature below, I hereby affirm that I have read and understood all terms and conditions of the general permit and I agree to abide by those conditions. I understand that knowingly providing false and inaccurate information is punishable as a class A misdemeanor

[ ] Check here to acknowledge that the Design Certification of On-Site Treatment Works and its required attachments are submitted with this application

This application form must be signed by the appropriate legally responsible party as follows: Corporations: Principal executive officer of at least vice-president level or duly authorized representative who is responsible for the overall operation of the facility. Partnerships Or Sole Proprietorship: General Partner or Proprietor. Municipalities/Government Agencies: Principal executive officer, other ranking elected official, or other duly authorized employee.

Applicant Signature | Print Name Robert Pollock | Date 01-24-2024

Title and Organization Pres. Member, owner

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Application for State Pollutant Discharge Elimination System (SPDES) General Permit GP-0-15-001

Groundwater Discharge of Treated Sanitary Sewage

CONTINUATION SHEET FOR MULTIPLE OUTFALLS

Outfall #2 (●) Existing ( ) Proposed

To Add/Remove outfalls, click +/- button

Design Flow in gpd (current or expected): 100 gpd

If previously covered by an individual SPDES permit, provide permit number: NY 3-5136-00094/00001

Type of Standard On-Site Treatment: Septic Tanks with -

- (●) Absorption Trenches
- ( ) Cut and Fill Systems
- ( ) Shallow Absorption Trenches
- ( ) Raised Systems
- ( ) Absorption Beds
- ( ) Seepage Pits

Type of Alternative On-Site Treatment: Septic Tanks with -

- ( ) Absorption Trenches Using An Alternative Aggregate
- ( ) Single-Pass Sand Filters & Pressurized Shallow Narrow Drainfields
- ( ) Shallow Absorption Trenches Using An Alternate Aggregate
- ( ) Mound Systems
- ( ) Absorption Beds Using An Alternative Aggregate
- ( ) Drip Dispersal or Other Low Profile Dispersal System

Note: Alternative aggregate may need a Beneficial Use Determination (BUD)

Note: Gravelless (aggregate-free) products may be used in certain Standard or Alternative systems as described in the Design Standards

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Application for State Pollutant Discharge Elimination System (SPDES) General Permit GP-0-15-001

Groundwater Discharge of Treated Sanitary Sewage

CONTINUATION SHEET FOR MULTIPLE OUTFALLS

Outfall 3 (●) Existing ( ) Proposed

To Add/Remove outfalls, click +/- button

Design Flow in gpd (current or expected): 1,920

If previously covered by an individual SPDES permit, provide permit number: NY 3-5136-00094/0001

Type of Standard On-Site Treatment: Septic Tanks with -

- ( ) Absorption Trenches
- ( ) Cut and Fill Systems
- ( ) Shallow Absorption Trenches
- ( ) Raised Systems
- (●) Absorption Beds
- ( ) Seepage Pits

Type of Alternative On-Site Treatment: Septic Tanks with -

- ( ) Absorption Trenches Using An Alternative Aggregate
- ( ) Single-Pass Sand Filters & Pressurized Shallow Narrow Drainfields
- ( ) Shallow Absorption Trenches Using An Alternate Aggregate
- ( ) Mound Systems
- ( ) Absorption Beds Using An Alternative Aggregate
- ( ) Drip Dispersal or Other Low Profile Dispersal System

Note: Alternative aggregate may need a Beneficial Use Determination (BUD)

Note: Gravelless (aggregate-free) products may be used in certain Standard or Alternative systems as described in the Design Standards

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Application for State Pollutant Discharge Elimination System (SPDES) General Permit GP-0-15-001

Groundwater Discharge of Treated Sanitary Sewage

CONTINUATION SHEET FOR MULTIPLE OUTFALLS

Outfall 4 ○ Existing ○ Proposed

To Add/Remove outfalls, click +/- button

Design Flow in gpd (current or expected): 7,150 gpd

If previously covered by an individual SPDES permit, provide permit number: NY

Type of Standard On-Site Treatment: Septic Tanks with -

- ○ Absorption Trenches
- ○ Cut and Fill Systems
- ○ Shallow Absorption Trenches
- ○ Raised Systems
- ✓ Absorption Beds
- ○ Seepage Pits

Type of Alternative On-Site Treatment: Septic Tanks with -

- ○ Absorption Trenches Using An Alternative Aggregate
- ○ Single-Pass Sand Filters & Pressurized Shallow Narrow Drainfields
- ○ Shallow Absorption Trenches Using An Alternate Aggregate
- ○ Mound Systems
- ○ Absorption Beds Using An Alternative Aggregate
- ○ Drip Dispersal or Other Low Profile Dispersal System

Note: Alternative aggregate may need a Beneficial Use Determination (BUD)

Note: Gravelless (aggregate-free) products may be used in certain Standard or Alternative systems as described in the Design Standards

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NEW YORK STATE OF OPPORTUNITY | **Department of Environmental Conservation**

Application for State Pollutant Discharge Elimination System (SPDES) General Permit GP-0-15-001

Groundwater Discharge of Treated Sanitary Sewage

CONTINUATION SHEET FOR MULTIPLE OUTFALLS

Outfall 5 ○ Existing ✓ Proposed To Add/Remove outfalls, click +/- button

Design Flow in gpd (current or expected): 4,920 gpd

If previously covered by an individual SPDES permit, provide permit number: **NY**

Type of Standard On-Site Treatment: Septic Tanks with -

- ○ Absorption Trenches
- ○ Cut and Fill Systems
- ○ Shallow Absorption Trenches
- ○ Raised Systems
- ✓ Absorption Beds
- ○ Seepage Pits

Type of Alternative On-Site Treatment: Septic Tanks with -

- ○ Absorption Trenches Using An Alternative Aggregate
- ○ Single-Pass Sand Filters & Pressurized Shallow Narrow Drainfields
- ○ Shallow Absorption Trenches Using An Alternate Aggregate
- ○ Mound Systems
- ○ Absorption Beds Using An Alternative Aggregate
- ○ Drip Dispersal or Other Low Profile Dispersal System

Note: Alternative aggregate may need a Beneficial Use Determination (BUD)

Note: Gravelless (aggregate-free) products may be used in certain Standard or Alternative systems as described in the Design Standards

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Application for State Pollutant Discharge Elimination System (SPDES) General Permit GP-0-15-001

Groundwater Discharge of Treated Sanitary Sewage

CONTINUATION SHEET FOR MULTIPLE OUTFALLS

Outfall 6 ○ Existing ✓ Proposed To Add/Remove outfalls, click +/- button

Design Flow in gpd (current or expected): 4,730 gpd

If previously covered by an individual SPDES permit, provide permit number: NY

Type of Standard On-Site Treatment: Septic Tanks with -

- ○ Absorption Trenches
- ○ Cut and Fill Systems
- ○ Shallow Absorption Trenches
- ○ Raised Systems
- ✓ Absorption Beds
- ○ Seepage Pits

Type of Alternative On-Site Treatment: Septic Tanks with -

- ○ Absorption Trenches Using An Alternative Aggregate
- ○ Single-Pass Sand Filters & Pressurized Shallow Narrow Drainfields
- ○ Shallow Absorption Trenches Using An Alternate Aggregate
- ○ Mound Systems
- ○ Absorption Beds Using An Alternative Aggregate
- ○ Drip Dispersal or Other Low Profile Dispersal System

Note: Alternative aggregate may need a Beneficial Use Determination (BUD)

Note: Gravelless (aggregate-free) products may be used in certain Standard or Alternative systems as described in the Design Standards

6/6

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Design Certification of On-site Treatment Works
State Pollutant Discharge Elimination System (SPDES)
General Permit GP-0-15-001
Groundwater Discharge of Treated Sanitary Sewage

THIS FORM MUST BE SUBMITTED WITH THE PERMIT APPLICATION, THE ENGINEERING DESIGN AND SITE PLAN FOR THE ON-SITE TREATMENT WORKS

All NEW or MODIFIED on-site wastewater treatment systems seeking authorization by GP-0-15-001 require certification of the treatment system design by a professional engineer (PE).

To request General Permit authorization, submit:

- This form,
- One printed and one electronic copy (as PDF) of the engineering design and site plan for the on-site treatment works, and
- Application form for SPDES General Permit GP-0-15-001

to: NYSDEC Regional Permit Administrator for your project area (refer to the Application Instructions for GP-0-15-001 for addresses).

By the seal and signature below, the PE certifies that:

1. He/she is a licensed professional engineer registered to practice engineering in New York State; and

2. The wastewater treatment system serving the identified facility is designed in accordance with the Design Standards for Intermediate-Sized Wastewater Treatment Systems (NYSDEC, 2014) and, for on-site systems located in the Lake George basin, is designed in accordance with the Design Standards for Wastewater Treatment Works in the Lake George Basin (NYSDEC, 2015).

Signature of Professional Engineer | **Date**

Barry Medenbach | 1/24/24

Printed Name of Professional Engineer | **Telephone** | **Email**

Barry Medenbach PE | 845-687-0047 | Barry@Mecels.com

Professional Engineer's Mailing Address | **Post Office City** | **State** | **Zip**

Medenbach & Eggers CELS PC 4305 US Hwy 209 Stone Ridge NY 12484 | Stone Ridge | NY | 12484

Name of Applicant/Permittee | **Facility Name**

220 North Road Realty LLC | Buttermilk Falls

Facility Address/City

220 North Road Milton NY 12547 c/o Robert Pollock

State | **Facility Zip** | **Facility County**

New York | 12547 | Ulster

STATE OF NEW YORK * BARRY MEDENBACH * No. 060142 LICENSED PROFESSIONAL ENGINEER

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 3
21 South Putt Corners Road, New Paltz, NY 12561-1620
P: (845) 256-3054 | F: (845) 255-4659
www.dec.ny.gov

June 20, 2024

VIA EMAIL

Inn at Buttermilk Falls
Attn: Barry Medenbach, Medenbach, Eggers & Carr
Barry@mecels.com

Re: Buttermilk Falls Hotel & Resort Expansion
DEC ID: 3-5136-00143/00001
Article 17, State Pollutant Discharge Elimination System (SPDES)
Town of Marlborough, Ulster County

NOTICE OF INCOMPLETE APPLICATION

Dear Barry Medenbach,

The New York State Department of Environmental Conservation (Department or DEC) has reviewed the modification application submitted for Buttermilk Falls proposed hotel and resort expansion, prepared by Medenbach, Eggers & Carr, for the facility located at 220 North Road, in the Town of Milton, received on March 15, 2024.

Based on our review of the submitted materials, Department staff have determined that the application is incomplete. A complete submission for a project should completely comply with the NYS DEC 2014 Design Standards for Intermediate Sized Wastewater Treatment Systems and SPDES General Permit 0-15-001. This requires combined design flow to be less than 30,000 gallons per day, proper percolation testing and flow rate, treatment systems eligible for GP coverage, and a PE certification on the engineering design plan.

Review of the proposed wastewater treatment plans has indicated that more information is required. The Division of Water offers the comments below that require clarification and additional information:

1. For every 1000 sq. ft. of absorption area, at least 1 percolation test should occur. Proposed outfall #4 contains 13,000 sq. ft. of absorption area, proposed outfall #5 contains 9000 sq. ft. of absorption area, and proposed outfall #6 also contains 9000 sq. ft. of absorption area. These areas would require 26 percolation tests for outfall #4, and 18 percolation tests for outfalls #5 and #6. According to the proposed wastewater plan only 3 tests were performed for #4, 4 tests for #5, and 9 tests for #6. None of the proposed outfalls meet the required percolation hole testing to proceed.

2. In conventional soil-based treatment beds, percolation rates should be faster than 30 minutes per inch (mpi). If 30 mpi is exceeded, absorption bed placement should be adjusted or relocated. For proposed outfall #5, P14 exceeds this limit with 32 mpi.
3. Percolation testing should occur inside of the proposed absorption bed area. Test 9, 10, 13, and 14 are outside of the proposed absorption bed areas.
4. A design flow confirmation letter from Ulster County Department of Health is required.

Your application will remain incomplete until the new application materials have been received, as allowed under the Uniform Procedures Act (UPA) regulations at 6 NYCRR 621.6(e). Please provide an electronic copy of all materials. Please reference DEC ID: 3-5136-00143.

If you have any questions regarding the above request, please contact me via email at alysse.devine@dec.ny.gov. If you have technical questions about SPDES requirements, please contact Nicholas Pamas, NYSDEC Division of Water, at Nicholas.Pamas@dec.ny.gov.

Sincerely,

Alysse Devine

Alysse Devine
Division of Environmental Permits

Ecc: Nicholas Pamas, NYSDEC Division of Water
Manju Cherian, NYSDEC Division of Water
Town of Marlborough Clerk

NOTE: Regarding erosion/sedimentation control requirements:
Stormwater discharges require a State Pollutant Discharge Elimination System (SPDES) Stormwater permit from this Department if they either:

- occur at industrial facilities and contain either toxic contaminants or priority pollutants OR
- result from construction projects involving the disturbance of 5000 square feet or more of land within the NYC Department of Environmental Protection East of Hudson Watershed or for proposed disturbance of 1 acre or more of land outside the NYC DEP Watershed

Your project may be covered by one of two Statewide General Permits or may require an individual permit. For information on stormwater and the general permits, see the DEC website at http://www.dec.ny.gov/chemical/8468.html.

B.4.b Percolation Testing

Hydraulic conductivity can be estimated using soil percolation tests. Tests should be run during spring, as system failure is more likely in wet months. In addition to percolation test results, soil evaluation information may be required by the approving jurisdiction (see Appendix A) and could include some or all of the following:

- Description of percolation test procedure
- Depth of percolation hole(s) (should be based on the finished grade elevation of the area)
- Record of thickness of soil horizons, soil types, texture (USDA), consistence, and color
- Elevation/depth of the seasonally high groundwater level or record of colored mottling
- Elevation/depth of soils to bedrock or impervious strata and other prominent features such as visible pores, stoniness, roots, or animal traces.
- Number of percolation test holes dug
- Percolation rate (mpi) - stabilized
- Sewage application rate (gal/day/sq. ft.)
- Deep-soil test pit and percolation hole locations shown on-site plan

For a conventional trench or bed system, the percolation test should be performed at the depth of the proposed system based on the proposed finished grade elevation of the site. Percolation tests should be run in an area immediately adjacent to or in between, areas proposed for absorption trenches. At least two percolation tests for every 1,000 sq. ft. of absorption area should be performed in holes spaced uniformly throughout the site. If soil conditions are highly variable, more tests may be required. For larger systems, i.e. greater than 5,000 gpd where soil maps and confirming observational data indicate uniform soils over a large area, fewer percolation tests may be approved by the Reviewing Engineer.

If a seepage pit is under consideration, percolation tests should be done at least at one-half the final depth and at full depth of the seepage pit. If different soil layers are encountered when digging the test hole for a seepage pit, a percolation test should be performed in each layer with the overall percolation rate being the weighted average of test results based upon the depth of each layer. Test pit soil layers (for seepage pits) with percolation rates slower than 30 minutes per inch (mpi) should be excluded from these calculations.

For mound systems, percolation tests on native soil should be performed just within the estimated