AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
ONE NATIONAL LIFE DRIVE, DAVIS BUILDING, 3rd FLOOR
MONTPELIER, VT 05620-3522

FACT SHEET FOR PERMIT

September 2021-Revised November 2021

PRETREATMENT DISCHARGE PERMIT

PERMIT NO: 3-1406
PIN: WY06-0020

NAME AND ADDRESS OF APPLICANT:

New England Waste Services, Inc.
220 Avenue B
Williston, Vermont 05495

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Coventry, VT Landfill
New England Waste Services of Vermont (NEWSVT)
21 Landfill Lane
Coventry, VT 05825

Bethlehem, NH Landfill
North Country Environmental Services (NCES)
581 Trudeau Road
Bethlehem, NH 03574

Central Vermont Landfill
(CV Landfill)
418 US Route 2
East Montpelier, VT 05651

RECEIVING WASTEWATER TREATMENT FACILTY:

City of Montpelier Wastewater Treatment Facility
949 Dog River Road
Montpelier, VT 05602

I. Proposed Action, Type of Facility, and Discharge Location

The Secretary of the Vermont Agency of Natural Resources (Secretary) received a renewal application from New England Waste Services, Inc. (Permittee) for a Pretreatment Permit to discharge to the City of Montpelier Wastewater Treatment Facility (WWTF) on May 25, 2016, and an amendment application on September 19, 2012. The Permittee is currently operating under a Pretreatment Permit effective on January 1, 2012 (hereafter referred to as the "current permit"). The current permit has been administratively continued, pursuant to 3 V.S.A. § 814, as the applicant filed a complete application for permit reissuance within the prescribed time period as per the Vermont Water Pollution Control Permit Regulations (VWPCPR) § 13.5(b). At this time, the Secretary has made a tentative decision to reissue the pretreatment discharge permit.

II. Description of Discharge

The Permittee is permitted to haul and discharge landfill leachate from two active landfills: NEWSVT and NCES, and one closed landfill: CV, through outfall S/N 001 to the City of Montpelier WWTF headworks.

III. Limitations and Conditions

The draft permit contains limitations and monitoring requirements for effluent Flow, Biochemical Oxygen Demand (BOD_5), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), pH, Total Aluminum, Total Iron, Total Molybdenum, Total Chloride, Total Kjeldahl Nitrogen (TKN), Nitrate/Nitrite (NO_x), Total Phosphorus (TP), Per and poly- fluoroalkyl substances (PFAS), and Priority Pollutants including Total Metals, Volatile Organic Compounds (VOCs), Acid and Base/Neutral Extractable Compounds, Pesticides, and Polychlorinated Bi-Phenyls (PCBs). The basis for these limitations and monitoring requirements are explained in Section V. of this Fact Sheet.

IV. Facility Description and Background

The Permittee owns and operates the active NEWSVT Coventry Landfill located in Coventry, VT; the active NCES landfill in Bethlehem, NH; and the closed CV landfill located in East Montpelier, VT. Leachate is generated from the three landfills and hauled via truck to municipal WWTFs for treatment.

The NEWSVT landfill is located on a 627-acre parcel of land. The landfill conducts landfilling operations in the 78.2 acre lined landfill known as Phases I through IV. In 2018, the landfill was permitted to construct and operate a 51.2 expansion, known as Phase VI. This expansion will provide approximately 20 years of additional capacity at the site. Unlined areas A and B were closed in the early 1990's and will continue to be maintained under post-closure care and monitoring requirements.

NEWSVT leachate produced from all cells (closed and active) is collected in several double lined cells and transferred via gravity to a 20,000-gallon underground storage tank via gravity lines, pump houses, and force mains. From the underground storage tank, leachate is pumped to a continuously mixed 438,000-gallon double-walled aboveground storage tank. Leachate is then transferred from the storage tank to trucks via the leachate load out station and hauled to Concord, NH, Plattsburgh, NY, or a permitted VT municipal WWTF for treatment. The Permittee is in the process of constructing a second double-walled aboveground storage tank to collect increased leachate flows associated with the Phase VI landfill expansion. Leachate flows are anticipated to increase from 60,000 gallons per day to 100,000 gallons per day following the Phase VI expansion.

The CV Landfill is a closed landfill located on approximately 52 acres of land on Route 2 in East Montpelier, Vermont. The CV Landfill was closed in 1993 and now only operates as a transfer facility, hazardous waste collection facility, and recycling center.

The unlined landfill occupies about 16 acres and is comprised of two adjacent landfill mounds. The primary area (western mound) and a portion of the smaller mound (eastern mound) was capped with a synthetic capping system in 2001. The synthetic cap covers approximately 15 acres of the 16-acre landfill. The northern portion of the western mound is covered with an earthen cap, which was constructed in the early 1990s.

A leachate collection trench system is located along the toe of the northern and southern CV Landfill slopes. Leachate and surface water drainage is collected by the collection system and flows to an 8,000-gallon double-walled underground storage tank. Leachate is manually pumped from the storage tank to a tanker truck and hauled to a permitted VT municipal WWTF for treatment.

The NCES landfill is an active landfill located in Bethlehem, NH. The landfill is approximately 50 acres, with another three-acre expansion pending. It is anticipated the landfill will be full and closed around 2027 or 2028.

There are three leachate collection sumps across the 50 acres. Two 30,0000-gallon underground storage tanks store leachate. Leachate is pumped from the storage tank to a tanker truck and typically hauled a NH municipal WWTF for treatment. Leachate from NCES was hauled to a VT WWTF only four days out of the last five years (2016 – 2020). A single 158,000-gallon aboveground storage tank is used for backup leachate storage.

V. Permit Basis and Explanation of Effluent Limitation Derivation

The Permittee's proposed discharge has the potential to exceed 25,000 gallons per day and 5% of the designed organic treatment capacity of the receiving municipal WWTF. Therefore, the Permittee's discharge satisfies the provisions of 40 C.F.R. § 403.3(v) and 10 V.S.A. § 1259(a) and is classified as a Significant Industrial User.

A. Change in Outfalls:

The draft permit maintains outfall S/N 001 (City of Montpelier WWTF) and proposes the elimination of the following outfalls:

1. **Elimination of S/N 002**: City of Burlington North WWTF, 3000 North Avenue, Burlington, VT. The draft permit does not authorize a discharge to the City of Burlington North WWTF due to the WWTF's lack of leachate receiving capacity per communication with the Permittee dated April 7, 2021.

2. **Elimination of S/N 004**: Village of Essex Junction WWTF, 39 Cascade Street, Essex Junction, VT. The draft permit does not authorize a discharge to the Village of Essex Junction WWTF due to the WWTF's refusal to accept leachate until pretreatment for per and poly- fluorinated substances (PFAS) is implemented in accordance with the Tri-Town Sewer Committee's recommendation dated February 16, 2021.

3. **Elimination of S/N 005**: City of Barre WWTF, 69 Treatment Plant Drive, Barre, VT. The draft permit does not authorize a discharge to the Barre City WWTF because the Secretary has not received a valid allocation of wastewater capacity from the City to the Permittee.

4. **Elimination of S/N 006**: City of Newport WWTF, 94 Treatment Plant Lane, Newport, VT. The draft permit does not authorize a discharge to the Newport City WWTF in accordance with the Condition 18. of the Secretary's Act 250 decision pursuant to Case No: 7R0841-13. The Condition specifically prohibits the discharge of landfill leachate to the Newport City WWTF until "new science, new technology and/or or new data which demonstrates, or seeks to demonstrate, that the risk to the Lake Memphremagog water quality (drinking water supply) will not be unduly adverse.".

B. Flow

The current permit authorizes a maximum day discharge of 23,000 gpd through outfall S/N 001 to the City of Montpelier WWTF. However, leachate flows may exceed 23,000 gpd so long as the discharge meets the BOD_5 limitation of 1,200 lbs/day, maximum day. Each day leachate exceeds 23,000 gpd, a BOD_5 sample is collected to determine compliance with the maximum day BOD_5 limitation.

The draft permit proposes a maximum day discharge limit of 60,000 gallons per day (gpd). This discharge limitation is based on the allocation issued to the Permittee on April 2, 2021, and subsequent correspondence with the Secretary, City, and Permittee on April 6, April 7, and April 13, 2021. The flow limitation is based on influent feed rate and leachate storage tank capacity at the City of Montpelier WWTF.

This limit does not authorize an increase to the amount leachate discharged to the Montpelier WWTF because under the current permit the Permittee has been able to consistently exceed 23,000 gpd due to compliance with the daily maximum BOD_5 limitation. Over the past five years (January 2016 through December 2020) the maximum day discharge flow to the Montpelier WWTF exceeded 23,000 gpd during 54 months of the 60-month period. The monthly average discharge flow to the Montpelier WWTF was 18,979 gpd and the maximum day discharge flow was 65,388 gpd during the five-year period.

Leachate flow shall be measured daily by weighing each outbound tanker truck and converting the weight to gallons.

C. Conventional Pollutants

1. Biochemical Oxygen Demand (BOD_5)

The draft permit maintains the maximum day BOD_5 effluent limitation of 1,200 lbs/day. This limitation is based on the updated allocation issued to the Permittee from the City of Montpelier on April 2, 2021, and subsequent correspondence with the Secretary, City, and Permittee on April 6, April 7, and April 13, 2021. This allocation has been reserved by the City since the Secretary's Pretreatment Permit dated December 31, 2006.

The weekly maximum limitation of 7,200 lbs of BOD_5 has been removed from the draft permit in accordance with the City's updated allocation letter. The Secretary supports this change because the receiving WWTF organic treatment capacity is expressed in BOD_5 lbs/day, not lbs/week. Therefore, a weekly total limitation does not allow the City WWTF to effectively manage its organic treatment capacity.

The condition that requires the daily monitoring of BOD_5 when leachate flows exceed 23,000 gpd has also been removed from the draft permit. To demonstrate compliance with the maximum day limitation monitoring for BOD_5 is proposed twice per week. This monitoring regime is consistent with other facilities of similar size and is sufficient to characterize the facility's discharge and determine compliance with the discharge limitation.

2. Total Suspended Solids (TSS)

The draft permit maintains the quarterly monitoring requirement to characterize the amount of TSS present within the discharge and assess the TSS loading to the Montpelier WWTF.

3. pH

The pH limitation within the draft permit is 5.0 to 9.0 Standard Units to prevent an exceedance of the Federal Specific Prohibition located at 40 C.F.R. § 403.5(b)(2). Daily monitoring for pH via grab sample is remains unchanged from the current permit.

D. Non-Conventional Pollutants

1. Chemical Oxygen Demand (COD)

The draft permit maintains the quarterly monitoring requirement for COD. COD monitoring is maintained in attempt to establish a statistically reliable correlation between BOD_5 and COD concentrations. The COD analysis is faster than the BOD_5 analysis; therefore, if a reliable correlation is established, the parameter can serve as a timely and effective indicator of BOD_5 discharged to the WWTF.

2. Total Nitrogen (TN)

The draft permit includes a quarterly monitoring requirement for Total Kjeldahl Nitrogen (TKN), and Nitrate and Nitrite as Nitrogen (NO_x), to determine Total Nitrogen (TN). TN is a calculated value based on the sum of NO_x and TKN, and, shall be calculated as: TN (mg/L) = TKN (mg/L) + NO_x (mg/L).

TKN monitoring is required to characterize the potential oxygen demand and ammonia loading from the discharge to the Montpelier WWTF. Per the most recent Reasonable Potential Determination (RPD) conducted in conjunction with the October 1, 2017, issuance of the Montpelier WWTF National Pollutant Discharge Elimination System (NPDES) Permit, concerns regarding instream Ammonia concentrations exist at receiving water temperatures greater than 23°C. Since the 2017 RPD, the Montpelier WWTF has been required to perform monthly effluent monitoring of Ammonia to assess the impact of Ammonia on the Winooski River. January 2016 through December 2020 leachate data indicates the Permittee's leachate is a significant source of TKN and Ammonia to the WWTF and is present at concentrations much greater than medium-strength wastewater influent (40 mg/L TKN and 25 mg/L Ammonia as Nitrogen) per Metcalf & Eddy's *Wastewater Engineering Treatment & Reuse 4th Edition* (Metcalf and Eddy, January 2002). Permittee leachate concentrations of TKN over the last five years (January 2016 through December 2020) are as follows:

TKN	NEWSVT	CV Landfill	NCES
Average, mg/L	1,155	67	921 (873 NH3-N)
Max, mg/L	1,900	150	1,300 (1,100 NH3-N)

TN monitoring is required to gather the amount of TN in this discharge and its potential impact on the receiving water. Per EPA, excess nitrogen (N) and phosphorus (P) are the leading cause of water quality degradation in the United States. Historically nutrient management focused on limiting a single nutrient—phosphorus or nitrogen—based on assumptions that production is usually phosphorus limited in freshwater and nitrogen limited in marine waters. However, scientific research demonstrates this is an overly simplistic model. The evidence clearly indicates management of both phosphorus and nitrogen is necessary to protect water quality. The literature shows that aquatic flora and fauna have differing nutrient needs, some are P dependent, others N dependent and others are co-dependent on these two nutrients.

Like P, N promotes noxious aquatic plant and algal growth. High concentrations of P and N together cause greater growth of algae than P alone. The relative abundance of these nutrients also influences the type of species within the community. Furthermore, a high N-to-P ratio may exacerbate the growth of cyanobacteria, while elevated levels of nitrogen increase toxicity in some cyanobacteria species. Given the dynamic nature of all aquatic ecosystems, for the State to fully understand the degradation to water quality it is necessary to limit P and monitor bioavailable N (including nitrate, ammonium, and certain dissolved organic nitrogen compounds). For more information, see: https://www.epa.gov/sites/production/files/documents/nandpfactsheet.pdf.

3. Total Phosphorus (TP)

The draft permit includes a quarterly monitoring requirement for TP to collect data on the amount of TP in the discharge. TP is a pollutant of concern due to the Lake Champlain's TP impairment and the City of Montpelier WWTF's stringent Waste Load Allocation (WLA) under the Lake Champlain Total Maximum Daily Load (TMDL). The City is required to assess and monitor significant sources of TP in accordance with its Phosphorus Optimization Plan.

4. Total Chloride

The draft permit maintains a quarterly monitoring requirement for Total Chloride to assess the impact of Total Chloride on the effluent discharge of the Montpelier WWTF.

5. Priority Pollutant Metals, Total Aluminum, Total Iron, & Total Molybdenum

The draft permit maintains the quarterly monitoring requirement for Total Metals to assess the impact of Total Metals on the Montpelier WWTF's sludge and effluent discharge. Total Metals includes EPA's thirteen Priority Pollutant metals (Antimony, Arsenic, Beryllium, Cadmium, Copper, Chromium, Lead, Mercury, Nickel, Selenium, Silver, Thallium, and Zinc; per 40 C.F.R. § 423, Appendix A), Total Aluminum, Total Iron, and Total Molybdenum.

Total Aluminum has been added as a monitoring requirement to assess the impact of Total Aluminum on the Montpelier WWTF's discharge, in light of the recent publication of EPA's 2018 Aluminum Aquatic Life Criteria.

As part of this permit renewal, the impact of Total Metals from the leachate discharge on the WWTF's effluent quality and receiving water was assessed. Influent WWTF concentrations were calculated using average and maximum leachate concentrations from the January 2016 through December 2020 monitoring period at a leachate flow of 60,000 gpd and a minimum monthly average influent flow of 1.21 million gallons per day (MGD) (minimum observed monthly average Montpelier WWTF flow during the January 2016 through December 2020 monitoring period).

Assuming 100% pass-through of Total Metals to the effluent of the WWTF, all metals except for Total Arsenic and Total Iron were calculated not to exceed receiving water quality standards at the 7Q10 instream waste concentration of 0.077 (Montpelier WWTF Design Flow: 3.97; MGD = 6.142 cubic feet per second (CFS); Winooski River 7Q10 flow = 73.95 CFS) and Annual Median instream waste concentration of 0.012 (Winooski River Annual Median flow = 527 CFS) for constituents classified as known, probable, or possible human carcinogens.

Total Iron: Per the 2017 Montpelier WWTF RPD, above and below receiving water monitoring for Total Iron indicates compliance with the Consumption of Water & Organisms Human Health Water Quality Criteria and Chronic Aquatic Life Criteria:

Total Iron (µg/L)	**Above WWTF (River Mile 54.7)**	**Below WWTF (River Mile 54.3)**	**Consumption of Water & Organisms Human Health Water Quality Criteria**	**Chronic Aquatic Life Criteria**
9/9/2015	161.7	153.3	300.0	1,000

There is currently no Montpelier WWTF effluent data for Total Iron. Therefore, to further assess the reasonable potential of the leachate discharge and Montpelier WWTF effluent to cause or contribute to an instream toxic impact or instream excursion of the Total Iron water quality standard, the draft permit requires the quarterly monitoring of leachate and Montpelier WWTF influent and effluent for Total Iron. Influent and effluent data will be used to assess the Total Iron removal rate across the WWTF, and impact of effluent on the receiving water. This data will be assessed during the upcoming 2022 renewal of the Montpelier WWTF NPDES permit.

Total Arsenic: WWTF Total Arsenic effluent concentrations were calculated by applying the median Total Arsenic removal rate of 45% through activated sludge treatment plants, per EPA's *Fate of Priority Pollutants in Publicly Owned Treatment Works, Volume II* (EPA 440/1-82/303, September 1982), to calculated WWTF influent concentrations. Using this conservative calculation, NEWSVT, CV, and NCES instream receiving water concentrations (RWCs) of Total Arsenic were calculated as follows:

Total Arsenic (mg/L)	NEWSVT	CV	NCES
Average Leachate Concentration	0.65	0.010	0.16
Max Leachate Concentration	2.2	0.098	0.21
Montpelier WWTF Calculated Average Effluent Concentration	0.018	0.00028	0.0043
Montpelier WWTF Calculated Max Effluent Concentration	0.059	0.0026	0.0057
Average Instream RWC at Annual Median Flow	0.00021	0.0000033	0.000052
Max Instream RWC at Annual Median Flow	0.00071	0.000032	0.000068
Acute Aquatic Life Criteria	0.34		
Chronic Aquatic Life Criteria	0.15		
Consumption of Organisms Only	0.0015		
Consumption of Water & Organisms Human Health Water Quality Criteria	0.00002		
Maximum Contaminant Level (MCL)	0.010		

Insufficient data was available to determine if the discharge of Total Arsenic would exceed the Consumption of Water & Organisms Human Health Water Quality Criteria. Specifically, there is currently no influent Total Arsenic data for the Montpelier WWTF. There is also no data on the removal efficiency of Total Arsenic by the Montpelier WWTF. Finally, per the 2017 Montpelier WWTF RPD, above and below receiving water data was reported below the detection limit of 0.001 mg/L, which is not sensitive enough to determine compliance with the Human Health Criteria.

In addition, the Consumption of Water & Organisms Human Health Water Quality Criteria applies to drinking water compliance. In accordance with § 29A-306 of the 2016 Vermont Water Quality Standards, the Winooski River shall be suitable for use as a public water source with filtration, disinfection, and other required treatment. Maximum and average calculated RWCs meet the Maximum Contaminant Limit (MCL) for finished drinking water, specified in Subchapter 21-6.12 of the Vermont Water Supply Rule, dated April 12, 2019. At these calculated levels of Total Arsenic, the receiving water satisfies the management objective.

To further assess the reasonable potential of the leachate discharge and Montpelier WWTF effluent to cause or contribute to an instream toxic impact or instream excursion of the Total Arsenic water quality standard, the draft permit requires the quarterly monitoring of leachate and Montpelier WWTF influent and effluent for Total Arsenic. Influent and effluent data will be used to assess the Total Arsenic removal rate across the WWTF, and impact of effluent on the receiving water. This data will be assessed during the upcoming 2022 renewal of the Montpelier WWTF NPDES permit.

6. Priority Pollutants, Volatile Organic Compounds (VOCs), Acid and Base/Neutral Extractable Compounds, Pesticides, and Polychlorinated Bi-Phenyls (PCBs)

The draft permit requires twice per year monitoring of Priority Pollutant VOCs, Acid and Base/Neutral Extractable Compounds, Pesticides, and PCBs. The full list of Priority Pollutants can be found at 40 C.F.R. § 423, Appendix A, and as Attachment B to the draft Pretreatment Permit.

The monitoring frequency has been increased from once to twice per year to assess the variability of these pollutants in the NEWSVT leachate following the commissioning of the Phase VI landfill expansion.

As part of this permit renewal, the impact of leachate Priority Pollutants on the WWTF's effluent quality and receiving water was assessed. Influent WWTF concentrations of detected Priority Pollutants were calculated using average and maximum leachate concentrations from the January 2016 through December 2020 monitoring period at a leachate flow of 60,000 gpd and a minimum monthly average influent flow of 1.21 MGD (minimum observed monthly average Montpelier WWTF flow during the January 2016 through December 2020 monitoring period).

Assuming 100% pass-through of Priority Pollutants to the effluent of the WWTF, all pollutants were calculated not to exceed receiving water quality standards at the 7Q10 instream waste concentration of 0.077 (Montpelier WWTF Design Flow: 3.97 MGD = 6.142 cubic feet per second (CFS); Winooski River 7Q10 flow = 73.95 CFS) and Annual Median instream waste concentration of 0.012 (Winooski River Annual Median flow = 527 CFS) for constituents classified as known, probable, or possible human carcinogens.

For pollutants without water quality standards, 2018 through 2020 annual Montpelier WWTF Toxic Pollutant Scan data was reviewed (See Toxic Pollutant Scan codified at 40 C.F.R. § 401.15, Table 1 and 40 C.F.R. § 122, Appendix J, Table 2). No pollutants present in leachate were detected in WWTF effluent data, indicating the WWTF is achieving removal of these compounds.

To further assess the reasonable potential of the leachate discharge and Montpelier WWTF effluent to cause or contribute to an instream toxic impact or instream excursion of any water quality standard, the draft permit requires the twice per year monitoring of leachate and Montpelier WWTF influent and effluent for Priority Pollutants. Influent and effluent data will be used to assess the Priority Pollutant removal rate across the WWTF, and impact of effluent on the receiving water.

In addition, due to the potential for toxic pollutants to be present within landfill leachate, twice per year acute and chronic Whole Effluent Toxicity (WET) testing is required for the Montpelier WWTF effluent to provide enough data to assess WET reasonable potential to cause or contribute to an excursion above any narrative or numeric water quality criteria during the upcoming 2022 renewal of the Montpelier WWTF NPDES permit.

7. Per and Poly- Fluoroalkyl Substances (PFAS)

During 2019 and 2020, the Secretary analyzed PFAS concentrations within landfill leachate, at WWTFs that accept leachate, and WWTFs that do not accept leachate. The report found that facilities accepting large volumes of landfill leachate, including the Montpelier WWTF, have higher concentrations of PFAS in their effluent when compared to facilities that do not accept leachate. The sampling results are outlined in the report: *Poly- and Perfluoroalkyl Substances at Wastewater Treatment Facilities and Landfill Leachate* (Weston and Sampson, January 30, 2020).

To characterize the concentration of PFAS in the leachate discharge, monthly leachate monitoring is required for the five regulated PFAS (PFHxS, PFHpA, PFNA, PFOS, and PFOA) and the list of twenty-six PFAS and precursors identified in Attachment A of the draft Pretreatment Permit.

While the EPA's multi-lab validated method is currently under development, the Permittee shall use EPA modified method 537 Version 1.1, solid phase extraction and liquid chromatograph/tandem mass spectrographic methods. Isotope dilution for QA/QC adjustments shall be implemented to compensate for matrix interferences and related recovery percentages.

The Permittee shall use a Clean Water Act approved method once a sufficiently sensitive test method has been approved under 40 C.F.R. § 136. EPA expects these methods will be available by the end of 2021. This approach is consistent with 40 CFR § 122.44(i)(1)(iv)(B), which states that in the case of pollutants or pollutant parameters for which there are no approved methods under 40 C.F.R. § 136, or methods are not otherwise required under 40 CFR chapter I, subchapter N or O, monitoring shall be conducted according to a test procedure specified in the permit for such pollutants or pollutant parameters.

Instream Water Quality Monitoring: Currently there are no Federal or State water quality standards for PFAS. The Secretary is in the process of establishing a statewide standard by January 1, 2024, in accordance the *State of Vermont Plan: Deriving Ambient Water Quality Standards for the Emerging Chemicals of Concern: Per- and Polyfluoroalkyl Substances (PFAS)* (VT Agency of Natural Resources, February 2020). Specifically, the Secretary is pursuing the development of a human health water quality standard expressed as a fish tissue concentration, based on the amount of PFAS in fish that can be consumed by a sensitive person per week.

Due to the concentrations of PFAS in the Montpelier WWTF (compared to other WWTFs that do not accept leachate) and the absence of water quality standards for PFAS, Condition I.A.4. of the draft Pretreatment Permit requires instream water quality monitoring for PFAS at representative locations above and below the WWTF's discharge. This monitoring is necessary for the Secretary to assess the reasonable potential of PFAS from the leachate and WWTF discharge to cause water column concentrations to reach levels that may contribute to the accumulation of PFAS in fish tissue such that it poses a potential risk to humans when consuming the fish.

If the Secretary finds that water column concentrations exceed levels that pose potential risk to humans when consuming fish, the Secretary reserves the right to reopen the permit to require the collection and sampling of representative fish species downstream of the WWTF discharge, and if necessary, develop site-specific water quality standards for PFAS.

Leachate Treatment for Emerging Contaminants: In 2019, the Permittee conducted the *Conceptual Leachate Treatment Scoping Study for New England Waste Services of Vermont (NEWSVT) Landill* (Casella Waste System, Inc.; October 11, 2019) to evaluate two on-site and two off-site leachate treatment options pursuant to Condition 86 of the Permittee's Solid Waste Management Facility Certification #OL510, effective October 12, 2018.
The study found that treatment options are available and continue to evolve for reducing or eliminating contaminants of emerging concern, including PFAS, from landfill leachate and

WWTF effluent. However, these treatment options create a concentrated waste residual that also must be disposed of or destroyed, and the science and technologies available for managing the waste residuals and potential air emissions from these treatment options are still developing.

Condition I.A.5. of the draft Pretreatment Permit requires the Permittee to advance the work performed as part of the leachate treatment scoping study by requiring the Permittee to pilot test a leachate treatment or pretreatment system identified in or equivalent to those technologies presented in the 2019 study. The study shall identify a leachate pretreatment or treatment technology to remove PFAS and other pollutants from the NEWSVT, NCES, and CV leachate. Upon completion of this study and the subsequent review and acceptance of the study by the Secretary, it is the Agency's intention to require full scale implementation and treatment for the entire volume of leachate by this leachate pretreatment or treatment technology.

E. Special Conditions

1. Special Condition I.A.3.a. requires the Permittee to submit a copy of all monitoring data required by the Pretreatment Permit in a Microsoft Excel spreadsheet format once per year, with the December Discharge Monitoring Report (DMR) submission.

2. Special Condition I.A.3.b. prohibits the discharge of leachate to any Vermont municipal WWTF not included on this Pretreatment Permit.

3. Special Condition I.A.3.c. includes language that requires the Permittee to apply to the Secretary for amendment of this permit if the City of Montpelier modifies any allocation granted for this discharge, or the Permittee receives authorization to discharge to another Vermont municipal WWTF.

4. Special Condition I.A.3.d. requires the Permittee to notify the City of Montpelier WWTF of any discharge known or suspected to violate the conditions of the discharge permit.

5. Special Condition I.A.3.e. requires the Permittee to perform repeat sampling within 30 days of becoming aware of any effluent limit violation to demonstrate continued compliance. This Condition is required in accordance with 40 C.F.R. § 404.12(g)(2).

6. Special Condition I.A.3.f. is intended to prohibit the discharges of any waste that interferes, passes through, or adversely impacts the City of Montpelier WWTF or the receiving water. In addition, this Condition specifies the Secretary's ability to reopen the permit and establish a discharge limitation or other permit condition to prohibit such impacts, if necessary.

7. Electronic Reporting - The EPA recently promulgated a final rule to modernize the Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. The final rule requires the inclusion of electronic reporting requirements in NPDES permits that become effective after December 21, 2015. The rule requires that NPDES regulated entities that are required to submit DMRs, including majors and nonmajors, individually permitted or covered by a general permit,

must do so electronically after December 2016. The Secretary has created an electronic reporting system for DMRs and has recently trained facilities in its use. As of December 2020, these NPDES facilities will also be expected to submit additional information electronically as specified in Appendix A in 40 CFR part 127.

VI. Procedures for Formulation of Final Determinations

The public comment period for receiving comments on this draft permit was originally scheduled from September 20, 2021 to November 8, 2021. A request to extend the public comment period was received on November 2, 2021. **The Secretary has agreed to extend the public comment period, which has been revised to September 20, 2021 to November 24, 2021**, during which time interested persons may submit their written views on the draft permit. All written comments received by 4:30 PM on November 24, 2021, will be retained by the Secretary and considered in the formulation of the final determination to issue, deny or modify the draft permit.

While not required, the Secretary has chosen to use the Environmental Notice Bulletin (ENB) for purposes of making this permit available for public notice and comment. The requirements of 10 V.S.A. sect. 7701 et seq. do not apply to this permit because the application was deemed administratively complete prior to January 1, 2018. Comments may be submitted via the ENB at http://enb.vermont.gov.

Comments may also be submitted by e-mail to ANR.WSMDWastewaterComments@vermont.gov.

Written comments should be sent to:

Agency of Natural Resources
Department of Environmental Conservation
Watershed Management Division
One National Life Drive, Davis Building, 3rd Floor
Montpelier, VT 05620-3522

For additional information, contact Amy Polaczyk at 802-828-1115.

Public hearings for this permit will be held on the following dates. Public hearings will be accessible in-person and virtually via Microsoft Teams:

- October 26, 2021, from 5:30 – 7:30 PM
  Newport Gateway Center Floor #1
  84 Fyfe Drive, Newport, VT 05855
  Join on your computer or mobile app: https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZGI1ZTUzMzMtNmJhYy00NWUwLWEyYWItOWYzZjIyZDcwODdh%40thread.v2/0?context=%7b%22Tid%22%3a%2220b4933b-baad-433c-9c02-70edcc7559c6%22%2c%22Oid%22%3a%22a870de9c-397b-456e-91f3-47227c8f7e3c%22%7d. Or call in (audio only): +1 802-828-7667, United States, Montpelier. Phone conference ID: 144 161 579#

- October 28, 2021, from 5:30 – 7:30 PM
  Agency of Natural Resources Annex Building
  190 Junction Road, Berlin, Vermont 05602
  Join on your computer or mobile app: https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZDZlMjhkYWUtNmU5OC00ZWJhLWI2YmEtNTYxZmI3MWU2Mzlj%40thread.v2/0?context=%7b%22Tid%22%3a%2220b4933b-baad-433c-9c02-70edcc7559c6%22%2c%22Oid%22%3a%22a870de9c-397b-456e-91f3-47227c8f7e3c%22%7d. Or call in (audio only): +1 802-828-7667, United States, Montpelier. Phone Conference ID: 796 679 119#

Any person may submit oral or written statements and data concerning the draft permit at the public hearings. The Secretary may establish reasonable limits on the time allowed for oral statements and may require the submission of statements in writing. All statements, comments, and data presented at the public hearings will be retained by the Secretary and considered in the formulation of the final determination to issue, deny, or modify the draft permit.

The complete application, draft permit, and other information are on file and may be inspected by appointment on the 3rd floor of the Davis Building at One National Life Drive, Montpelier, Vermont. Copies may be obtained by calling 802-828-1115 from 7:45 AM to 4:30 PM Monday through Friday and will be made at a cost based upon the current Secretary of State Official Fee Schedule for Copying Public Records. The draft permit and fact sheet may also be viewed on the Watershed Management Division's website at http://www.watershedmanagement.vt.gov.