Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

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UIC PERMIT

Issued to

Town of Madison
284 Green Hill Road
Madison, CT 06443

Location Address:
Daniel Hand High School, Walter Polson Middle School, and Milton Jeffrey Elementary School
284 Green Hill Road
Madison, CT 06443

Permit ID: UI0000376
Watershed: Neck River
Basin Code: 5107

Effective Date: 12/1/2019

Permit Expires: 11/30/2029

SECTION 1: GENERAL PROVISIONS

(A) This permit is reissued in accordance with section 1421 of the Federal Safe Drinking Water Act 42 USC 300h et. seq., section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended.

(B) The Town of Madison, ("Permittee"), shall comply with all conditions of this permit including the following sections of the RCSA which have been adopted pursuant to section 22a-430 of the CGS and are hereby incorporated into this permit. Your attention is especially drawn to the notification requirements of subsection (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(C), (j)(11)(C), (D), (E) and (F), (k)(3) and (4), and (l)(2) of section 22a-430-3.

Section 22a-430-3 General Conditions

(a) Definitions
(b) General
(c) Inspection and Entry
(d) Effect of a Permit
(e) Duty to Comply
(f) Proper Operation and Maintenance
(g) Sludge Disposal
(h) Duty to Mitigate
(i) Facility Modifications; Notification
(j) Monitoring, Records and Reporting Requirements
(k) Bypass
(l) Conditions Applicable to POTWs
(m) Effluent Limitation Violations (Upsets)
(n) Enforcement
(o) Resource Conservation
(p) Spill Prevention and Control
(q) Instrumentation, Alarms, Flow Recorders
(r) Equalization

Section 22a-430-4 Procedures and Criteria

(a) Duty to Apply

(b) Duty to Reapply
(c) Application Requirements
(d) Preliminary Review
(e) Tentative Determination
(f) Draft Permits, Fact Sheets
(g) Public Notice, Notice of Hearing
(h) Public Comments
(i) Final Determination
(j) Public Hearings
(k) Submission of Plans and Specifications. Approval.
(l) Establishing Effluent Limitations and Conditions
(m) Case by Case Determinations
(n) Permit issuance or renewal
(o) Permit Transfer
(p) Permit revocation, denial or modification
(q) Variances
(r) Secondary Treatment Requirements
(s) Treatment Requirements for Metals and Cyanide
(t) Discharges to POTWs - Prohibitions

(C) Violations of any of the terms, conditions, or limitations contained in this permit may subject the Permittee to enforcement action, including but not limited to, seeking penalties, injunctions and/or forfeitures pursuant to applicable sections of the CGS and RCSA.

(D) Any false statement in any information submitted pursuant to this permit may be punishable as a criminal offense under section 22a-438 or 22a-131a of the CGS or in accordance with section 22a-6, under section 53a-157 of the CGS.

(E) The Permittee shall comply with Section 22a-416-1 through Section 22a-416-10 of the RCSA concerning operator certification.

(F) No provision of this permit and no action or inaction by the Commissioner of Energy & Environmental Protection ("Commissioner") shall be construed to constitute an assurance by the Commissioner that the actions taken by the Permittee pursuant to this permit will result in compliance or prevent or abate pollution.

(G) The authorization to discharge under this permit may not be transferred without prior written approval of the Commissioner. To request such approval, the Permittee and proposed transferee shall register such proposed transfer with the Commissioner at least thirty (30) days prior to the transferee becoming legally responsible for creating or maintaining any discharge which is the subject of the permit transfer. Failure, by the transferee, to obtain the Commissioner's approval prior to commencing such discharge(s) may subject the transferee to enforcement action for discharging without a permit pursuant to applicable sections of the CGS and RCSA.

(H) Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.

(I) An annual fee shall be paid for each year this permit is in effect as set forth in section 22a-430-7 of the RCSA.

(J) On or before the 10-year anniversary of the date of issuance of this permit, the Permittee shall submit for the Commissioner's review, a comprehensive engineering report prepared by a professional engineer licensed to practice in Connecticut that evaluates the performance and operation of the on-site sewage

treatment and disposal system. Such report shall include a detailed summary of the discharge monitoring reports. A physical inspection of the system shall be performed in the presence of Department of Energy and Environmental Protection ("DEEP" or "Department") staff. Prior to conducting the comprehensive review, the Permittee shall contact the Bureau of Materials Management and Compliance Assurance.

(K) This permitted discharge is consistent with the applicable goals and policies of the Connecticut Coastal Management Act (section 22a-92 of the CGS).

SECTION 2: DEFINITIONS

(A) The definitions of the terms used in this permit shall be the same as the definitions contained in section 22a-423 of the CGS and sections 22a-430-3(a) and 22a-430-6 of the RCSA.

(B) In addition to the above, the following definitions shall apply to this permit:

"Annual", in the context of a sampling frequency, shall mean the sample must be taken in the month of February.

"Average Monthly Limit" means the highest allowable average of all grab samples taken during any calendar month.

"Maximum Concentration", in the context of this permit, is defined as the maximum concentration at any time as determined by a grab sample.

"Quarterly", in the context of a sampling frequency, shall mean sampling is required during each calendar quarter ending on the last day of March, June, September and December.

"Semi-Annual", in the context of a sampling frequency, shall mean the sample must be taken in the months of February and August.

"3 times per year", in the context of a maintenance frequency, shall mean the maintenance must be performed at least three (3) times during the period of May to November.

"Twice per month", when used as a sample frequency, shall mean two samples per calendar month collected no less than twelve (12) days apart.

"Twelve Month Rolling Average", means the average monthly concentration of the current month's samples averaged with the average monthly concentration from each of the previous eleven months.

SECTION 3: COMMISSIONER'S DECISION

(A) The Commissioner has made a final determination and found that the continuance of the existing system to treat the discharge will protect the waters of the state from pollution. The Commissioner's decision is based on Application No.201815258 for permit reissuance received on November 30, 2018 and the administrative record established in the processing of that application.

(B) The Commissioner hereby authorizes the Permittee to discharge a maximum flow of twenty-nine thousand and five hundred fifty (29,550) gallons per day of domestic sewage in accordance with the provisions of this permit, the above referenced application, and all approvals issued by the Commissioner or the Commissioner's authorized agent for the discharges and/or activities authorized by, or associated with, this permit as follows:

(1) From the issuance of this permit through and including the last day of the first calendar month of such issuance, the Commissioner hereby authorizes the Permittee to discharge in accordance with the terms and conditions of Permit No. UI0000376, issued by the Commissioner to the Permittee on June 11, 2009, the previous application submitted by the Permittee on August 8, 2001, and all modifications and approvals issued by the Commissioner or the Commissioner's authorized agent for the discharge and/or activities authorized by, or associated with, Permit No. UI0000376, issued by the Commissioner to the Permittee on June 11, 2009.

(2) Beginning on the first day of the month following the issuance of this permit and continuing until this permit expires or is modified or revoked, the Commissioner hereby authorizes the Permittee to discharge in accordance with the terms and conditions of this permit, Application No. 201815258 received by the Department on November 30, 2018, and all modifications and approvals issued by the Commissioner or the Commissioner's authorized agent for the discharge and/or activities authorized by, or associated with, this permit.

(C) The Commissioner reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions that may be authorized under the Federal Safe Drinking Water Act or the Connecticut General Statutes or regulations adopted thereunder, as amended. The permit as modified or renewed under this paragraph may also contain any other requirements of the Federal Safe Drinking Water Act or Connecticut General Statutes or regulations adopted thereunder, which are then applicable.

SECTION 4: EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(A) The use of any sewage system additive as defined in section 22a-460(g) of the CGS is prohibited unless such additive complies with section 22a-461 of the CGS. The Commissioner in no way certifies the safety or effectiveness of any sewage system additive.

(B) Oils, greases, industrial or commercial wastes, toxic chemicals, or other substances that will adversely affect the operation of the subsurface sewage treatment and disposal system, or, which may pollute ground or surface water, shall not be discharged to the subsurface sewage treatment and disposal system.

(C) The Permittee shall assure that groundwater affected by the subject discharge shall conform to the Connecticut Water Quality Standards.

(D) The Permittee shall operate and maintain all processes as installed in accordance with the approved plans and specifications and as outlined in the associated operation and maintenance manual. This includes but is not limited to all *aeration equipment, aeration tank cycling, anoxic tanks, chemical feed systems, effluent filters* or any other process equipment necessary for the optimal removal of pollutants. The Permittee shall neither bypass nor fail to operate any of the approved equipment or processes without the written approval of the Commissioner.

(E) The discharges shall not exceed and shall otherwise conform to the specific terms and conditions listed in this permit. The discharges are restricted by, and shall be monitored in accordance with the Table(s) A through C, which are incorporated into this permit as Attachment 1.

(F) The pH of the discharge shall not be less than 6.0 nor greater than 9.0 Standard Units at any time and shall be monitored in accordance with this permit. The Permittee shall report pH values, specifically maximum and minimum, for each day of sample collection.

(G) The Permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report on the discharge monitoring report the total flow and number of hours of discharge for the day of sample collection and the average daily flow for each sampling month.

TABLE E GROUNDWATER MONITORING			
Discharge Serial No. 301-2		**Monitoring Location:** GW	
Groundwater Monitoring Location No.: MW3, MW5, MW7		**Description:** Downgradient monitoring wells	
Parameter	**Units**	**Minimum Frequency of Sampling**	**Sample Type**
Fecal Coliform	col/100ml	Quarterly	Grab
Groundwater Depth (Standard depth below grade)	Ft	Quarterly	Instantaneous
Ammonia Nitrogen	mg/l	Quarterly	Grab
Nitrate Nitrogen	mg/l	Quarterly	Grab
Nitrite Nitrogen	mg/l	Quarterly	Grab
Total Kjeldahl Nitrogen	mg/l	Quarterly	Grab
Total Nitrogen	mg/l	Quarterly	Grab
pH	S.U.	Quarterly	Instantaneous
Total Dissolved Phosphorous	mg/l	Quarterly	Grab

ATTACHMENT 3

TABLE D INSPECTION, MONITORING AND MAINTENANCE REQUIREMENTS		
Discharge Serial No.: 301-2, 302-1, 303-1	Monitoring Location: S	
Wastewater Description: Domestic Sewage		
Average Daily Flow: 16,667 gallons per day *(301-2)* 1,375 gallons per day *(302-1)* 1,500 gallons per day *(303-1)*	Maximum Daily Flow: 25,000 gallons per day *(301-2)* 2,300 gallons per day *(302-1)* 2,250 gallons per day *(303-1)*	
Inspection, Monitoring, or Maintenance	**Discharge Serial No.**	**Minimum Frequency**
Depth of sludge in equalization tank[s]	301-2	Quarterly
Pump out septic tank[s]	302-1, 303-1	Annually
Pump out grease trap[s]	301-2	Quarterly
Mechanical inspection of grease trap baffles	301-2	During pump-out
Mechanical inspection of pump station[s]	301-2, 302-1	Monthly/Quarterly
Pump out pump chamber[s]	301-2, 302-1	Annually
Pump out equalization tank	301-2	Annually
Test run of emergency generator	301-2	Monthly/Quarterly
Water meter readings of water usage	301-2, 302-1, 303-1	Quarterly
Visual inspection of Amphidrome System	301-2	Monthly
Visual inspection of anoxic chambers	301-2	Monthly
Visual inspection of denitrification filter	301-2	Monthly
Mechanical inspection of alarms	301-2	Monthly
Mechanical inspection of blowers	301-2	Monthly
Mechanical inspection of chemical feed system(s)	301-2	Monthly
Mechanical inspection of valve chamber(s)	301-2	Monthly
Visual inspection of surface condition of leaching field(s)	301-2, 302-1, 303-1	Quarterly
Depth of ponding in leaching field(s)	301-2	Semi-Annually
Mow grass over leaching field(s)	301-2, 302-1, 303-1	3 times per year

ADDITIONAL NOTES:

1. All inspection, monitoring, and maintenance required in this table shall be reported annually by the end of each January as an attachment to the December DMR.
2. The Madison Health Department Sanitarian shall be notified at least one week prior to pumping of septic tanks and grease traps. Verification of all pump outs shall be attached to the monitoring report and a copy of the report shall be sent to the Town of Madison Director of Health.

ATTACHMENT 2

TABLE C					
Discharge Serial No. 301-2 (High School)			Monitoring Location: 1		
Wastewater Description: Pretreated Domestic Sewage Effluent					
Monitoring Location Description: Final Effluent Pump Chamber					
FLOW/TIME BASED MONITORING					
Parameter	**Units**	**Average Daily Flow Limit**	**Maximum Daily Flow Limit**	**Sample Type**	**Sample Frequency**
Flow Rate (Average daily)[1]	gpd	16,667	25,000	Daily flow	Continuous
INSTANTANEOUS MONITORING					
Parameter	**Units**	**Average Monthly Limit**	**Maximum Concentration**	**Sample Type**	**Sample Frequency**
Biochemical Oxygen Demand[3]	mg/l	20	30	Grab	Twice per month
Total Suspended Solids	mg/l	20	30	Grab	Twice per month
Total Nitrogen	mg/l	10[2]	30	Grab	Twice per month
Ammonia	mg/l	---	---	Grab	Twice per month
Nitrate Nitrogen	mg/l	---	---	Grab	Twice per month
Nitrite Nitrogen	mg/l	---	---	Grab	Twice per month
Total Kjeldahl Nitrogen	mg/l	---	---	Grab	Twice per month
Total Phosphorus	mg/l	---	---	Grab	Twice per month
pH	SU	---	---	Grab	Weekly
Alkalinity	mg/l	---	---	Grab	Twice per month

FOOTNOTES:

1. For this parameter, the Permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report on the DMR the Average Daily Flow and the Maximum Daily Flow for each month.
2. Limit is based on a twelve month rolling average.
3. The system utilizes sucrose as a carbon source. Exceedances in the limit for BOD should result in an evaluation of the amount of sucrose added to the system.

ADDITIONAL NOTES:

1. "---" in the limits column on this monitoring table means a limit is not specified, but monitoring is required and a value must be reported on the DMR.

TABLE B				
Discharge Serial No. 301-2 (High School)			Monitoring Location: J	
Wastewater Description: Effluent Intermediate Process				
Monitoring Location Description: Clearwell No. 1				
Average Daily Flow: 16,667 gallons per day			Maximum Daily Flow: 25,000 gallons per day	
INSTANTANEOUS MONITORING				
Parameter	**Units**	**Average Monthly Limit**	**Sample Type**	**Sample Frequency**
pH	SU	---	Grab	Twice per month
Temperature	° F	---	Grab	Twice per month
Alkalinity	mg/l	---	Grab	Twice per month
Total Suspended Solids	mg/l	---	Grab	Twice per month

ADDITIONAL NOTES:

1. "---" in the limits column on this monitoring table means a limit is not specified, but monitoring is required and a value must be reported on the DMR.

TABLE A				
Discharge Serial No. 301-2 (High School)			Monitoring Location: G	
Wastewater Description: Domestic Sewage Influent				
Monitoring Location Description: Raw Sewage Pump Station				
Average Daily Flow: 16,667 gallons per day			Maximum Daily Flow: 25,000 gallons per day	
INSTANTANEOUS MONITORING				
Parameter	**Units**	**Average Monthly Limit**	**Sample Type**	**Sample Frequency**
Biochemical Oxygen Demand	mg/l	---	Grab	Twice per month
Total Suspended Solids	mg/l	---	Grab	Twice per month
Total Kjeldahl Nitrogen	mg/l	---	Grab	Twice per month
Total Phosphorus	mg/l	---	Grab	Twice per month
pH	SU	---	Grab	Twice per month
Oil & Grease	mg/l	---	Grab	Monthly

ADDITIONAL NOTES:

1. "---" in the limits column on this monitoring table means a limit is not specified, but monitoring is required and a value must be reported on the DMR.

ATTACHMENT 1

A copy of each audit shall be submitted concurrently to the local Health Department.

This permit is hereby issued on November 7, 2019.

Yvonne Bolton, Bureau Chief
Department of Energy and Environmental Protection
Bureau of Materials Management and
Compliance Assurance

cc: Madison Health Dept.
DMR

("opt-out request"). Opt-out requests must be submitted in writing to the Department for written approval on or before fifteen (15) days prior to the date a Permittee would be required under this permit to begin filing DMRs and other reports using NetDMR. This demonstration shall be valid for twelve (12) months from the date of the Department's approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to the Department using NetDMR unless the Permittee submits a renewed opt-out request and such request is approved by the Department.
All opt-out requests and requests for the NetDMR subscriber form should be sent to the following address or by email at deep.netdmr@ct.gov:

Attn: NetDMR Coordinator
Connecticut Department of Energy and Environmental Protection
Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division
79 Elm Street
Hartford, CT 06106-5127

(d) Non-Electronic or Hard-Copy Submission:
The results of chemical analysis and treatment facilities monitoring that are not required to be submitted electronically under Section 5 shall be submitted in hard-copy form on a DMR. Such DMRs and other reports not required to be submitted electronically shall be reported to the Bureau of Materials Management and Compliance Assurance at the following address.

Attn: DMR Processing
Connecticut Department of Energy & Environmental Protection
Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division
79 Elm Street
Hartford, CT 06106-5127

(e) Copies of all hard-copy DMRs shall be submitted concurrently to the local Health Department.

(f) Copies of all hard-copy DMRs shall be submitted concurrently to the local Water Pollution Control Authority (hereinafter "WPCA").

SECTION 6: COMPLIANCE SCHEDULE

(A) Every two years, on or before the anniversary date of the issuance of this permit, the Permittee shall submit the results of a detailed permit compliance audit to the Commissioner. Such audits shall be performed within sixty (60) days prior to the anniversary date. The compliance audits shall be performed by a qualified professional engineer licensed to practice in Connecticut with the appropriate education, experience and training that is relevant to the work required.

Each audit shall evaluate compliance with all permit terms and conditions for the preceding two-year period. The evaluation shall review all pertinent records and documents as necessary, including Discharge Monitoring Reports (DMRs), laboratory reports, operations and maintenance plans, performance logs/records, equipment specifications, maintenance schedules, engineering drawings, and spare parts inventory.

Each audit report shall include a description of all records and documents used in the evaluation, a summary of compliance with permit terms and conditions, and detailed descriptions of all remedial actions taken or proposed to address each violation or deficiency discovered.

Attn: DMR Processing
Connecticut Department of Energy and Environmental Protection
Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division
79 Elm Street
Hartford, CT 06106-5127

(D) If this permit requires monitoring of a discharge on a calendar basis (e.g. Monthly, quarterly, etc.) but a discharge has not occurred within the frequency of sampling specified in the permit, the Permittee must submit the DMR as scheduled, indicating "NO DISCHARGE". For those permittees whose required monitoring is discharge dependent (e.g. per batch), the minimum reporting frequency is monthly. Therefore, if there is no discharge during a calendar month for a batch discharge, a DMR must be submitted indicating such by the end of the following month.

(E) NetDMR Reporting Requirements:
Prior to one-hundred and eighty (180) days after the issuance of this permit, the Permittee may report all chemical analysis, monitoring and maintenance data, and other reports to the Department in hard copy form or electronically using NetDMR, a web-based tool that allows Permittees to electronically submit discharge monitoring reports (DMRs) and other required reports through a secure internet connection. Unless otherwise approved in writing by the Commissioner, no later than one-hundred and eighty (180) days after the issuance of this permit the Permittee shall begin reporting electronically using NetDMR. Specific requirements regarding subscription to NetDMR and submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

(a) Submittal of NetDMR Subscriber Agreement:
On or before thirty (30) days after the issuance of this permit, the Permittee and/or the person authorized to sign the Permittee's discharge monitoring reports ("Signatory Authority") as described in RCSA Section 22a-430-3(b)(2) shall contact the Department at deep.netdmr@ct.gov and initiate the NetDMR subscription process for electronic submission of Discharge Monitoring Report (DMR) information. Information on NetDMR is available on the Department's website at www.ct.gov/deep/netdmr. On or before ninety (90) days after issuance of this permit the Permittee shall submit a signed copy of the *Connecticut DEEP NetDMR Subscriber Agreement* to the Department.

(b) Submittal of Reports Using NetDMR:
Unless otherwise approved by the Commissioner, on or before one-hundred and eighty (180) days after issuance of this permit, the Permittee and/or the Signatory Authority shall electronically submit DMRs and reports required under this permit to the Department using NetDMR in satisfaction of the DMR submission requirement in paragraph (C) of this Section of this permit. DMRs shall be submitted electronically to the Department no later than the last day of the month following the completed reporting period. All reports required under the permit, including any monitoring conducted more frequently than monthly or any additional monitoring conducted in accordance with 40 CFR 136, shall be submitted to the Department as an electronic attachment to the DMR in NetDMR. Once a Permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs to the Department. The Permittee shall also electronically file any written report of non-compliance described in paragraph (B) of this Section and in the following Section of this Permit as an attachment in NetDMR. NetDMR is accessed from:
https://netdmr.epa.gov/netdmr/public/home.htm.

(c) Submittal of NetDMR Opt-Out Requests:
If the Permittee is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for electronically submitting DMRs and reports, the Commissioner may approve the submission of DMRs and other required reports in hard copy form

(H) All samples shall be comprised of only those wastewaters described in this schedule, therefore, samples shall be taken prior to combination with wastewaters of any other type and after all approved treatment units, if applicable. All samples taken shall be representative of the discharge during standard operating conditions.

(I) In cases where limits and sample type are specified but sampling is not required, the limits specified shall apply to all samples which may be collected and analyzed by the Department of Energy and Environmental Protection personnel, the Permittee, or other parties.

(J) Unless a different classification of certified operator is required under a separate written approval issued by the Commissioner, the Permittee shall ensure that the wastewater treatment facility is operated by a person with a valid and effective certification in the State of Connecticut, at a minimum, as a facility Class III operator pursuant to C.G.S. 22a-416(d) and the regulations adopted thereunder. The Permittee shall ensure that the wastewater treatment facility is operated by such an operator with such qualifications throughout the entire life of the wastewater treatment facility.

(K) The Permittee shall monitor, inspect and maintain the treatment facilities in accordance with Table D, which is incorporated into this permit as Attachment 2.

(L) The Permittee shall perform ground (and surface) water monitoring in accordance with Table E, which is incorporated into this permit as Attachment 3.

(M) The monitoring and sampling required within this permit is the minimum for reporting purposes only. More frequent monitoring and sampling of the treatment system may be required to operate the facility to obtain acceptable results for the parameters being monitored as required by the Operation and Maintenance Manual approved by the Commissioner.

SECTION 5: SAMPLE COLLECTION AND HANDLING, ANALYTICAL TECHNIQUES, AND REPORTING REQUIREMENTS

(A) Chemical analyses to determine compliance with effluent limits and conditions established in this permit shall be performed using the methods approved by the Environmental Protection Agency pursuant to 40 CFR 136 unless an alternative method has been approved in writing in accordance with 40 CFR 136.4 or as provided in section 22a-430-3(j)(7) of the RCSA. Chemicals which do not have methods of analysis defined in 40 CFR 136 shall be analyzed in accordance with methods specified in this permit.

(B) If any sample analysis indicates that an effluent limitation specified in Section 4 of this permit has been exceeded, a second sample of the effluent shall be collected and analyzed for the parameter(s) in question and the results shall be reported to the Commissioner within thirty (30) days of the exceedance. Resampling for a permit violation is in addition to routine required sampling.

(C) The Permittee shall enter the results of chemical analysis and treatment facilities monitoring and maintenance required by Section 4 on a Discharge Monitoring Report (DMR) provided by this office and shall submit such DMR to the Bureau of Materials Management and Compliance Assurance at the address below. Except for continuous monitoring, any monitoring required more frequently than monthly shall be reported on an attachment to the DMR, and any additional monitoring conducted in accordance with 40 CFR 136 or other methods approved by the Commissioner shall also be included on the DMR, or as an attachment, if necessary. The report shall also include a detailed explanation of each violation of the limitations specified, the corrective actions performed, and a schedule for completing any necessary remaining corrective action. The DMR shall be received at this address by the last day of the month following the month in which the samples are taken.

DATA TRACKING AND TECHNICAL FACT SHEET

APPLICATION No.: 201815258 **PERMIT No.**: UI0000376

DISCHARGER NAME AND ADDRESS
APPLICANT/PERMITTEE: The Town of Madison
MAILING ADDRESS: 284 Green Hill Road, Madison CT, 06443
CONTACT PERSON: William H. McMinn
LOCATION ADDRESS: Daniel Hand High School, Walter Polson Middle School and Milton Jeffrey Elementary School

PERMIT TYPE
New ( ) Reissuance (X) Modification ( ) Subsection-e ( )

PERMIT DURATION
5 YEAR ( ) 10 YEAR (X) 30 YEAR ( )

OWNERSHIP CODE
Private ( ) Federal ( ) State ( ) Municipal (town only) (X) Other public ( )

DISCHARGE CATEGORIZATION
Point ( ) Non-point (X) GIS #_____

NPDES ( ) Pretreat (X) Ground Water (UIC) (X) Ground Water (Other) ( )

Major ( ) Significant Minor ( ) Minor (X)

UIC PERMIT INFORMATION
Total Wells **3** Well Type **5W12**

DEEP STAFF ENGINEER/ANALYST
Lauren Jones

NATURE OF BUSINESS GENERATING DISCHARGE
Domestic sewage generated by the Town of Madison's Daniel Hand High School, Walter Polson Middle School and Milton Jeffrey Elementary School.

PROCESS AND TREATMENT DESCRIPTION (by DSN) **AT(X)** **RECYLE ()**
DSN 301-2 (Daniel Hand High School) represents the discharge from the existing alternative sewage treatment system consisting of: septic tank(s), equalization tank(s), grease trap(s) settling tank, pump chambers, and an Amphidrome Wastewater Treatment System. The Amphidrome System utilizes a submerged attached growth biological treatment process with a current permitted processing capacity of 25,000 gallons per day; treated effluent from the Amphidrome System will discharge to an engineered leaching field for further nutrient removal.

DSN 302-1 (Walter Polson Middle School) represents the discharge from the existing conventional sewage treatment system consisting of: septic tank(s), equalization tank(s), grease trap(s) and an engineered leaching field with a permitted discharge capacity of 2,300 gallons per day.

DSN 303-1 (Milton Jeffrey Elementary School) represents the discharge from the existing conventional sewage treatment system consisting of: septic tank(s), equalization tank(s), and an engineered leaching field with a permitted discharge capacity of 2,250 gallons per day.

DATA TRACKING AND TECHNICAL FACT SHEET

COMPLIANCE SCHEDULE YES (X) NO ( )
Pollution Prevention ( ) Treatment Requirement ( ) Water Conservation ( )

Permit Steps ( ) Water Quality Requirement ( ) Remediation ( )

Audit Language (X) Other (X)

RESOURCES USED TO DRAFT PERMIT

__ Federal Effluent Limitation Guideline 40CFR
name of category

__ Performance Standards

__ Federal Development Document
name of category

__ Treatability Manual

X Department File Information

X Connecticut Water Quality Standards

__ Anti-degradation Policy

__ Coastal Management Consistency Review Form

__ Other – Explain

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

X Best Judgement (See Other Comments)
X Case by Case Determination (See Other Comments)

OTHER COMMENTS

A review of the discharge monitoring reports from 2015 to 2018 indicated overall compliance with the permit limits. Instances of non-compliance with effluent limits were due to equipment malfunction which was quickly addressed and when re-tested were within permit limits.

The groundwater monitoring has been in compliance with the nitrogen limit (10 mg/l) with the exception of well no. 7 (10.3 to 20.9 mg/l). This well is located down gradient of the system for Daniel Hand High School and is in the southwest corner of the property in the athletic fields. Groundwater sampling was done in 2003 prior to the construction of the system for Daniel Hand High School. Background levels for nitrogen ranged from 5 to 10 mg/l, most likely due to fertilizers used on the athletic fields or other sources.

The previous permit has been recorded on the Town of Madison land records.

The Department has received written comments from Nathan L. Jacobson & Associates, Inc. on behalf of the Town of Madison on the proposed action. The written comments are enumerated below in normal text and immediately proceeded by the Department's response in *italics*.

A. Attachment 1, Table A
   1. 3rd line of the table header, Monitoring Location Description.
      Since the wastewater description is "Domestic Sewage Influent" and considering that the equalization tank contains a percentage recycle of partially treated wastewater, it is requested that the monitoring location description of "Equalization Tank" be changed to

"Raw Sewage Pump Station" (note – this is the current sample location for "influent"). -ground grease trap prior to the raw sewage pump station. The grease trap is cl
Comment accepted and the permit has been revised.

2. Parameter – Oil & Grease
The current permit does not include testing wastewater influent for Oil & Grease. The existing facility is provided with a large capacity (5,000 gallon) in-ground grease trap prior to the raw sewage pump station. The grease trap is cleaned on a quarterly basis. Operating experience indicates that the grease trap is very effective in capturing the oil and grease contained in the High School kitchen wastewater and there is no problem with the oil and grease accumulation in the raw sewage pump station, anoxic tanks, Amphidrome tanks or final effluent pump chamber.

Since oil and grease has not been shown to be a problem over the past 16 years of operation, it is requested that testing the raw sewage for oil and grease content be eliminated. If the Department chooses to not eliminate testing for Oil & Grease, it is requested that the frequency of sampling be substantially reduced.

Comment acknowledged. Based on the Public Health Code Technical Standards, the current daily flow from the high school kitchen for 1,017 students at a rate of 3 gallons/student/day is 3,053 gallons per day. The existing grease trap has a volume of 5,000 gallons, which provides for more than twenty four hours of retention time in accordance with the Public Health Code Technical Standards. In addition, the school has entered into a maintenance contract with Sanitrol for the performance of the required inspections and cleanings for the systems in accordance with the requirements of the permit.

Based on this information, the Department has reduced the sampling frequency for oil and grease from twice per month to monthly.

B. Attachment 1, Table B
1. 3rd line of table header, Monitoring Location Description
Since the wastewater description is "Effluent Intermediate Process", it is requested that the monitoring location description "Process Tank" be changed to "Clearwell No. 1" (this location contains wastewater treated through the anoxic tanks and aerobic Amphidrome unit).

Comment accepted and the permit has been revised.

C. Attachment 1, Table C
1. 3rd line of table header, Monitoring Location Description
Since the wastewater description is "Pretreated Domestic Sewage Effluent", it is requested that the monitoring location description of "Pump Chamber" be changed to "Final Effluent Pump Chamber".

Comment accepted and the permit has been revised.

2. Instantaneous Monitoring portion of Table C
Parameters:
- Total Phosphorous – the wastewater treatment plant is designed for removal of

BOD, TSS and Nitrogen, but not specifically designed for Phosphorous removal, the reason being that the subsurface wastewater absorption system ("SWAS") and native soils beneath the SWAS remove any remaining phosphorous from the treated effluent. For 2015 through 2018, treated effluent maximum Phosphorous levels have averaged 11 mg/l to 23 mg/l, with a maximum value of 27 mg/l. In view of the fact that the overall system design relies upon the soil for Phosphorous removal, it is requested that a maximum concentration limit for Total Phosphorous in the treated effluent be eliminated.

Comment accepted and the permit has been revised.

- Ethanol – current treatment plan operation uses sugar solution as a carbon source for the biological denitrification process. On this basis it is requested that testing effluent for Ethanol be eliminated.

  Comment accepted and the permit has been revised.

- Sucrose – we understand that Sucrose has been added to the parameter monitoring list since sugar solution is currently used as a carbon source, however, we are not aware of any Standards Methods test for Sucrose. We request that testing the effluent for Sucrose be eliminated and that the testing for BOD in the final effluent be used as an indicator of any excess sugar solution.

  Comment acknowledged. The Department agrees that there is no Standard Methods test for sucrose at this time. The requirement to test the effluent for sucrose has been removed from Table C of the permit. The permittee shall continue to test for BOD, which will also be an indicator for the presence of excess sucrose.

- Oil & Grease – for the same reasons cited under item A.2. above, it is requested that testing the effluent for Oil & Grease be eliminated. If the Department chooses to not eliminate testing for Oil & Grease, it is requested that the frequency of sampling be substantially reduced.

  Comment acknowledged. Please see the Department's response to item A.2. above. The Department has removed the requirement in Table C to test for Oil & Grease in the final pretreated effluent.

D. Attachment 2, Table D

1. Inspection, Monitoring or Maintenance portion of Table D.

- Pump Out Grease Traps – The wastewater system at Milton Jeffrey Elementary School does not include a separate grease trap; the school is provided with a very large (10,000 gallon) septic tank. On this basis it is requested that DSN303-1 be eliminated from this line item.

  Comment accepted and the permit has been revised. The provided septic tank (10,000 gallon) is sized in accordance with the requirements of the Department of Public Health Technical Standards to function as grease trap.

- Test Run of Emergency Generator – Walter Polson Middle School is not

provided with an emergency generator. On this basis it is requested that DSN 302-1 be eliminated from this line item.

Comment accepted and the permit has been revised.

- Mechanical Inspection of Methanol Feed System – The treatment process uses sugar solution as a carbon source rather than Methanol. The system also includes an alkali solution feed system for pH control. On this basis it is requested that this line item be changed to "Mechanical Inspection of Chemical Feed Systems".

Comment accepted and the permit has been revised.

- Visual Inspection of Distribution Chambers – The subsurface wastewater absorption system for DSN 301-2 uses pressure distribution and there are no distribution chambers in the system. On this basis it is requested that this line item be eliminated.

Comment accepted and the permit has been revised.

PERMIT FEES

Discharge Code 312000a Representing DSN 301-2, 302-1 and 303-1
Annual Fee $555 (50% muni discount)

PROJECT HISTORY

Application received on November 30, 2018
Notice of Sufficiency signed December 14, 2018
Notice of Tentative Determination published in the New Haven Register on July 10, 2019