

UIC PERMIT RENEWAL & MODIFICATION

**issued to**

Johnson Memorial Hospital, Inc.  
201 Chestnut Hill Road  
Stafford Springs, CT 06076

**Location Address:**  
201 Chestnut Hill Road  
Stafford Springs, CT 06076

**Permit ID:** UI0000191

**Permit Expires:** September 06, 2028

**Watershed:** Edson Brook

**Basin Code:** 3101

**SECTION 1: GENERAL PROVISIONS**

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

“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.

“3 times per year”, in the context of a maintenance frequency, shall mean the maintenance must be performed at least 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 12 days apart.

“Twelve Month Rolling Average”, in the context of this permit, 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 modifications to the wastewater treatment plant of the existing system and the installation of new subsurface sewage disposal systems will protect the waters of the state from pollution. The Commissioner's decision is based on Application Nos. 200502448 and 201706716 for permit reissuance and modification received on November 16, 2005 and August 28, 2017 respectively, and the administrative record established in the processing of that application.
- (B) The Commissioner hereby authorizes the Permittee to discharge up to a maximum flow of fifty thousand (50,000) gallons per day of domestic sewage in accordance with the provisions of this permit, the above referenced application, 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, and as further specified below:
1. Effective upon permit issuance, the Permittee’s authorization to discharge shall be limited to a maximum flow of twenty six thousand six hundred and sixty seven (26,667) gallons per day of pretreated domestic sewage to pod nos. 5, 6, 7 and 8 of the engineered leaching system (completion of Construction Sequence Nos. I and II comprising pod nos. 3, 4, 5, 6, 7 and 8). The Permittee shall not initiate a discharge to any other pods of the engineered leaching system until it has complied with Sections 3(B)2 and 3(B)3 of this Permit described immediately below. In the event that such discharge exceeds twenty six thousand six hundred and sixty seven (26,667) gallons per day, the excess discharge shall be directed to existing infiltration bed nos. 2 and 3 for

subsequent pumping and transportation off-site by an appropriately licensed hauler to a properly licensed wastewater treatment facility.

2. Effective upon the Commissioner's written approval of the completion of Construction Sequence No. III (comprising pod nos. 1 and 2), in accordance with Section 3(B) 3 of this permit, the Permittee will be authorized to discharge a maximum flow of up to twenty three thousand and three hundred thirty three (23,333) gallons per day of pretreated domestic sewage to pod nos. 1, 2, 3 and 4. In addition, no further discharges to the existing infiltration beds are authorized under this Permit.
  3. The engineered leaching system and the alternative pretreatment system shall be constructed in accordance with the Approved Plans and Specification's dated June 26, 2018 and December 14, 2017 respectively. On or before thirty (30) days after completing each sequence of construction of the engineered leaching system, the Permittee shall submit record drawings, for the Commissioner's review and written approval, documenting that each sequence of construction has been constructed in accordance with such approvals. In addition, the Permittee shall include with such record drawings a written request to discharge to the specific pods of the engineered leaching system. The Permittee shall not initiate a discharge to any pod of the engineered leaching system without first obtaining the Commissioner's prior written approval pursuant to this paragraph.
- (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) This permit becomes effective on the date of signature.
- (E) 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 pump chambers, aeration equipment, aeration tank cycling, mixing equipment, clarifiers, chemical feed systems, effluent filters, septic tanks, equalization tanks 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.
- (F) The discharge(s) shall not exceed and shall otherwise conform to the specific terms and conditions listed in this permit. The discharge(s) 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.
- (G) 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.

- (H) 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.
- (I) 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.
- (J) 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.
- (K) 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 3 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.
- (L) The Permittee shall monitor, inspect and maintain the treatment facilities in accordance with Table D, which is incorporated into this permit as Attachment 2.
- (M) The Permittee shall perform ground water monitoring in accordance with Table E, which is incorporated into this permit as Attachment 3.
- (N) 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. All metals analyses identified in this permit shall refer to analyses for Total Recoverable Metal as defined in 40 CFR 136 unless otherwise specified.
- (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 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.

**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](mailto: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](http://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 or other reports 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 ("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](mailto: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 provided by this office. 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) On or before three (3) months after issuance of this permit, the Permittee shall verify in writing to the Commissioner that the alternative sewage treatment system is operating in accordance with the approved plans and specifications and is achieving compliance with all permit limits and conditions. As part of such verification, the Permittee shall obtain written concurrence from the design engineer, the technology provider, and the wastewater treatment facility operator who will be responsible for the operation of the wastewater treatment facility.
- (B) On or before seven (7) days after issuance of this permit, the Permittee shall record on the land records of the Town of Stafford Springs a document indicating the location of the zone of influence created by the subject discharge, as reflected in the application and approved plans and specifications for this permit. On or before one (1) month after issuance of this permit, the Permittee shall submit written verification to the Commissioner that the approved document indicating the location of the zone of influence created by the subject discharge as reflected in the application for this permit has been recorded on the land records in the Town of Stafford Springs.

- (C) On or before seven (7) days after issuance of this permit, the Permittee shall record a copy thereof on the land records in the Town of Stafford Springs. On or before one (1) month after issuance of this permit, the Permittee shall submit written verification to the Commissioner that this permit has been recorded on the land records in the Town of Stafford Springs.
- (D) No later than December 31, 2018, the Permittee shall complete the following repairs to the wastewater treatment system:
- a. Installation of handrails on the aeration tank;
  - b. Re-coating of the exterior of the aeration tanks;
  - c. Installation of a sacrificial anodes;
  - d. Installation of phosphorous removal equipment;
  - e. Final site work/grading; and
  - f. Development of the Operations & Maintenance Manual.

Within fifteen (15) days of completion of the repairs listed above, the Permittee shall submit documentation of completion to the Commissioner for review and written approval.

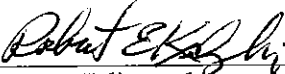
- (E) Every two years, on or before the anniversary date of the issuance of this permit, the Permittee shall submit the results of a detailed permit compliance audit to the Commissioner. Such audits shall be performed within sixty (60) days prior to the anniversary date. The compliance audits shall be 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.

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

This permit is hereby issued on *September 7, 2018*

  
Robert E. Kaliszewski  
Deputy Commissioner  
Department of Energy and Environmental Protection

cc: Local Health Dept.  
DMR



ATTACHMENT 1

<b>TABLE A</b>				
Discharge Serial No. <b>301-2A</b>			Monitoring Location: <b>G</b>	
Wastewater Description: Domestic Sewage Influent to Wastewater Treatment Plant				
Monitoring Location Description: Septic Tank Effluent				
Average Daily Flow: 26,680 gallons per day			Maximum Daily Flow: 40,000 gallons per day	
<b>INSTANTANEOUS MONITORING</b>				
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 Nitrogen	mg/l	---	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
Orthophosphate	mg/l	---	Grab	Twice per month
Total Phosphorus	mg/l	---	Grab	Twice per month
pH	SU	---	Grab	Twice per month
Oils & Grease	mg/l	---	Grab	Twice per month
<b>ADDITIONAL NOTES:</b>				
<ol style="list-style-type: none"> <li>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.</li> <li>2. Grab samples shall be taken during the period in which the peak hourly flow is experienced.</li> </ol>				

<b>TABLE B</b>				
Discharge Serial No. <b>301-2B</b>			Monitoring Location: J	
Wastewater Description: Effluent Intermediate Process				
Monitoring Location Description: Process tank				
Average Daily Flow: 26,680 gallons per day			Maximum Daily Flow: 40,000 gallons per day	
<b>INSTANTANEOUS MONITORING</b>				
<b>Parameter</b>	<b>Units</b>	<b>Average Monthly Limit</b>	<b>Sample Type</b>	<b>Sample Frequency</b>
pH	SU	---	Grab	Weekly
Temperature	°F	---	Grab	Weekly
Alkalinity	mg/l	---	Grab	Weekly
Turbidity	NTU	---	Grab	Weekly
<b>ADDITIONAL NOTES:</b>				
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 C					
Discharge Serial No. 301-2			Monitoring Location: 1		
Wastewater Description: Pretreated Domestic Sewage Effluent					
Monitoring Location Description: Final Effluent					
FLOW/TIME BASED MONITORING					
Parameter	Units	Average Daily Flow Limit	Maximum Daily Flow Limit	Sample Type	Sample Frequency
Flow Rate (Average daily) <sup>1</sup>	gpd	26,680	40,000	Daily flow	Continuous
INSTANTANEOUS MONITORING					
Parameter	Units	Average Monthly Limit	Maximum Concentration	Sample Type	Sample Frequency
Biochemical Oxygen Demand	mg/l	20	30	Grab	Twice per month
Total Suspended Solids	mg/l	20	30	Grab	Twice per month
Total Nitrogen	mg/l	7 <sup>2</sup>	10 <sup>3</sup>	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
Orthophosphate	mg/l	---	---	Grab	Twice per month
Total Phosphorus	mg/l	---	---	Grab	Twice per month
pH	SU	---	---	Grab	Twice per month
Alkalinity	mg/l	---	---	Grab	Twice per month
Oils & Grease	mg/l	---	---	Grab	Twice per month
Turbidity	NTU	---	---	Grab	Twice per month
<b>FOOTNOTES:</b>					
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. The 7 mg/l limit is based on a Twelve Month Rolling Average as defined in Section 2(B) of this Permit and shall be effective January 1, 2020.					
3. The limit of 10 mg/L shall be effective the date of permit issuance.					
<b>ADDITIONAL NOTES:</b>					
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 2

**TABLE D  
INSPECTION, MONITORING AND MAINTENANCE REQUIREMENTS**

Discharge Serial Nos.: 301-2 and 302-2		Monitoring Location: S
Wastewater Description: Domestic Sewage		
Average Daily Flow: DSN 301-2: 26,680 gallons per day DSN 302-2: 6,680 gallons per day		Maximum Daily Flow: DSN 301-2: 40,000 gallons per day DSN 302-2: 10,000 gallons per day
Inspection, Monitoring, or Maintenance	Discharge Serial No.	Minimum Frequency
Pump out septic tank[s]	301-2 & 302-2	Annually
Depth of sludge in septic tank[s]	301-2 & 302-2	During pump-out
Pump out pump chamber[s]	301-2 & 302-2	Annually
Pump out equalization tank	301-2 & 302-2	Annually
Pump out sludge holding tank	301-2	As needed
Pump out grease trap	301-2 & 302-2	Annually
Visual inspection of anoxic chambers	301-2	Monthly
Visual inspection of Smith & Loveless System	301-2	Monthly
Visual inspection of distribution chambers	301-2 & 302-2	Quarterly
Visual inspection of surface condition of leaching field(s)	301-2 & 302-2	Quarterly
Visual inspection of grease trap	301-2 & 302-2	Quarterly
Mechanical inspection of septic tank effluent filter	301-2 & 302-2	During pump-out
Mechanical inspection of septic tank baffles	301-2 & 302-2	During pump-out
Mechanical inspection of pump station[s]	301-2 & 302-2	Monthly/Quarterly
Mechanical inspection of alarms	301-2 & 302-2	Monthly
Mechanical inspection of blowers	301-2	Monthly
Mechanical inspection of valve chamber(s)	301-2 & 302-2	Monthly
Clean septic tank effluent filter	301-2 & 302-2	During pump-out
Test run of emergency generator	301-2 & 302-2	Monthly/Quarterly
Discharge flow meter readings	301-2 & 302-2	Daily
Depth of ponding in leaching field(s)	301-2 & 302-2	Quarterly
Mow grass over leaching field(s)	301-2 & 302-2	3 times per year
<b>ADDITIONAL NOTES:</b>		
<ol style="list-style-type: none"> <li>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.</li> <li>2. The North Central District 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 North Central District Health Department Director of Health.</li> </ol>		

ATTACHMENT 3

**TABLE E  
GROUNDWATER MONITORING**

<b>Discharge Serial Nos. 301-2</b>		<b>Monitoring Location: GW</b>	
<b>Groundwater Monitoring Location Nos.:</b> LEA-3, LEA-6, TW-3D, TW-22, TW-23, and TW-25		<b>Description: Downgradient monitoring well</b>	
<b>Parameter</b>	<b>Units</b>	<b>Minimum Frequency of Sampling</b>	<b>Sample Type</b>
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



# DATA TRACKING AND TECHNICAL FACT SHEET

APPLICATION Nos.: 200502448 & 201706716

PERMIT No.: UI0000191

## DISCHARGER NAME AND ADDRESS

**APPLICANT/PERMITTEE:** Johnson Memorial Hospital, Inc.

**MAILING ADDRESS:** 201 Chestnut Hill Road, Stafford Springs, CT 06076

**CONTACT PERSON:** Stuart Rosenberg (860) 684-8101

**LOCATION ADDRESS:** Johnson Memorial Hospital, 201 Chestnut Hill Road, Stafford Springs, CT 06076

## PERMIT TYPE

New  Reissuance  Modification  Subsection-e

## PERMIT DURATION

5 YEAR  10 YEAR  30 YEAR

## OWNERSHIP CODE

Private  Federal  State  Municipal (town only)  Other public

## DISCHARGE CATEGORIZATION

Point  Non-point  GIS # \_\_\_\_\_

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

Major  Significant Minor  Minor

## UIC PERMIT INFORMATION

Total Wells 2 Well Type 5W12

## DEEP STAFF ENGINEER/ANALYST

Lauren Jones

## NATURE OF BUSINESS GENERATING DISCHARGE

Johnson Memorial Hospital ("JMH") offers a comprehensive range of inpatient and outpatient healthcare services. Also operating on the JMH site is Evergreen Healthcare Center, which is a skilled nursing and rehabilitation facility that offers long-term care and short term rehabilitation and recovery services.

## PROCESS AND TREATMENT DESCRIPTION (by DSN) AT(X) RECYCLE ( )

JMH's existing permit authorizes a maximum daily discharge of 40,000 gallons per day to an existing alternative sewage treatment system. JMH is proposing a modification of its permit to authorize a maximum daily discharge of 50,000 gallons per day as follows: 40,000 gallons per day to a proposed modified alternative sewage treatment system [i.e., DSN 301-2]; and 10,000 gallons per day to a proposed newly constructed conventional system [i.e., DSN 302-2].

DSN 301-2 represents the discharge from a proposed modification of the existing alternative sewage treatment system, which presently consists of a comminutor (sewage grinder and screen), diversion box, aeration tanks, clarifiers and pump chamber ("Smith & Loveless System"). The Smith & Loveless System has a process capacity of 40,000 gallons per day and utilizes a return activated sludge treatment process. Treated effluent from the Smith & Loveless System, which presently discharges to six sand infiltration beds, will be discharged to a newly constructed engineered subsurface leaching system with a design capacity of 40,000 gallons per day.

APPLICATION Nos. 200502448 & 201706716

PERMIT No. UI0000191

## DATA TRACKING AND TECHNICAL FACT SHEET

JMH's proposed modifications to the existing Smith & Loveless System, the details of which will be required to be submitted in final plans and specifications for Department review and approval, include:

- Replace existing comminutor and bar rack with a new 5,000 gallon septic tank;
- Install a new 5,000 gallon equalization tank equipped with two pumps (i.e., one pump dedicated to DSN 302-1 and the other to DSN 302-2);
- Install a new 2,500 gallon pre-aeration tank equipped with 50 SCFM blower;
- Perform several modifications to the existing aeration tanks including:
  - Replace return activated sludge (RAS) piping with PVC pipe;
  - Remove mid-tank RAS channel and associated excess metal;
  - Install separate sludge pumps and piping to the sludge holding tank;
  - Install sacrificial anodes;
  - Recoat all visible structural steel elements located above effluent level, including influent trough, with appropriate coating;
  - Install in-line instrumentation to allow for effective cycling of blowers;
  - Connect in-line probes to an upgraded SCADA computerized control system;
  - Basin Nos. 1 and 2: Replace air piping support brackets, replace corroded top section of vertical corner stiffener angles, construct new bent plate assembly over horizontal steel stiffeners and curved plate; and
- Perform several modifications to the existing clarifiers, including:
  - Modify existing air-lift return sludge piping as follows: (1) separate the RAS air supply pumps from the aeration tanks and install a new blower unit; and (2) replace discharge piping and install new PVC RAS piping to convey return sludge flow to the aeration tanks;
  - Replace mechanical scum removal and conveyance system with a ScumMover vacuum pumping system;
  - Recoat all visible structural steel elements located above effluent level including the platform/bridge;
  - Level the ground surface around the tanks to extent practical;
  - Replace steel cable assemblies; and
  - Replace steel plates and pins for each rake arm assembly.
- Remove existing disinfection equipment; install new sand filtration equipment ;
- Relocate flow meter wiring below grade and install new influent flow meters
- Relocate the sludge wasting pipe below frost line between the aeration tanks and the sludge holding tank to enable use during sub-freezing temperatures, and install a pump to allow tanks to be manually decanted year round; and
- Install influent and effluent composite samplers.

JMH submitted final plans and specification for the replacement of the existing sand infiltration beds with engineered subsurface leaching systems, which were approved by the Department on December 14, 2017 and June 26, 2018. JMH has proposed the construction of the new engineered leaching systems in three sequences as follows:

- Sequence I construction consists of: Installation of pod nos. 5, 6, 7 and 8 of the engineered leaching system which will have a permitted capacity of twenty six thousand six hundred and sixty seven (26,6667) gallons per day and will provide a constructed hydraulic capacity of twenty seven thousand five hundred forty (27,540) gallons per day of pretreated effluent from the Smith & Loveless System; and the installation of two new pumps within the existing five-thousand (5,000) gallon pump chamber to dose pretreated effluent. After completion of installation JMH will submit record drawings, for the Commissioner's review and written approval, documenting that pod nos. 5, 6, 7 and 8 have been constructed in accordance with the approved plans and specifications.

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- Sequence II construction consists of: Installation of pod nos. 3 and 4 of the engineered leaching system which will have a permitted capacity of thirteen thousand three hundred and thirty three (13,333) gallons per day and will provide a constructed hydraulic capacity of thirteen thousand seven hundred and seventy (13,770) gallons per day of pretreated effluent from the Smith & Loveless System. After completion of installation JMH will submit record drawings, for the Commissioner's review and written approval, documenting that pod nos. 3 and 4 have been constructed in accordance with the approved plans and specifications.
  
- Sequence III construction consists of: (1) Installation of pod nos. 1 and 2 of the engineered leaching system which will have a permitted capacity of ten thousand (10,000) gallons per day and will provide a constructed hydraulic capacity of ten thousand three hundred twenty (10,320) gallons per day of wastewater; (2) Smith & Loveless System will be modified and repaired as follows: installation of a five-thousand (5,000) gallon capacity tank with screen to replace the existing comminutor; installation of a valve chamber within the existing eight inch sanitary pipe located after the new screen tank that will split the influent sewage by a ratio of 1:4 (i.e., 20% flow to the conventional system and 80% flow to the wastewater pretreatment plant); (3) installation of a fifteen-thousand (15,000) gallon capacity septic tank after the valve chamber to process up to ten thousand (10,000) gallon per day of conventional system flow prior to discharge; and (4) the decommissioning of the existing sand infiltration beds.

DSN 302-2 represents the discharge from the proposed new conventional subsurface sewage disposal system to be constructed as part of the Sequence III construction described above and consisting of a pump chamber, septic tank and engineered leaching field.

<b><u>COMPLIANCE SCHEDULE</u></b>	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
- Department File Information
- Connecticut Water Quality Standards
- Anti-degradation Policy
- Coastal Management Consistency Review Form
- Other – Explain

## DATA TRACKING AND TECHNICAL FACT SHEET

### BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

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

### OTHER COMMENTS

Johnson Memorial Hospital (JMH) submitted application no. 200502448 on November 16, 2005 for the renewal of permit no. UI0000191. On March 30, 2010 the Department issued Consent Order No. WC 5506 which requiring JMH to: (1) perform short-term repairs to the existing wastewater pretreatment system; and (2) submit a comprehensive and thorough report detailing the investigation of the rapid infiltration beds, underlying hydrogeological setting, the degree of soil, surface and groundwater contamination, identify alternatives for remedial actions, identify a preferred alternative, and include a schedule for completing either: 1) the repair of the onsite alternative sewage treatment systems and obtain a discharge permit, or 2) the construction of sanitary sewers to connect to the Stafford Water Pollution Control Facility pursuant to the Commissioner's Approval of Plans and Specifications dated November 27, 2007. Prior to 2017, JMH had been pursuing a sanitary sewer connection with the Town of Stafford in lieu of performing long-term repairs to its onsite alternative sewage treatment system.

On September 22, 2016 the Department issued NOV No. NOVWRSS16003, citing violations of failure to submit Discharge Monitoring Reports, Groundwater Monitoring Reports, and Inspection, Monitoring and Maintenance Reports; exceedances of permitted effluent limitations for specified periods of time; and failure to submit progress reports pursuant to the Consent Order.

In February of 2017, JMH representatives, their consultants and attorneys met with the department to present their plans to abandon pursuing a municipal sanitary sewer connection, correct the operational issues at the site, and address the outstanding NOV and Consent Order. Such plans include modification of the existing onsite alternative sewage treatment system, a comprehensive site investigation, a technical plan for repairing or replacing the existing onsite sand infiltration beds, and submittal of an updated permit application requesting modification of its wastewater discharge permit no. UI0000191. On August 28, 2017 an application for modification of the existing permit was submitted to the Department. The application contained the proposals outlined above.

The existing wastewater discharge permit requires that the wastewater pretreatment plant meet limits for biochemical oxygen demand, total suspended solids and fecal coliform. The renewed and modified permit will require that the upgraded wastewater pretreatment plant meet limits for biochemical oxygen demand, total suspended solids and total nitrogen; no limit is necessary for fecal coliform because the modified system will achieve passive renovation for pathogens (and also phosphorus) in the soils downgradient of the newly constructed engineered leaching systems prior to the discharge reaching the property line, an onsite drinking water well and any wetlands or watercourse. In addition, the proposed permit will require biennial compliance audits to evaluate compliance with all permit terms and conditions.

### As-built Drawings

On August 30, 2018 JMH submitted to the Department the record drawings certifying that pod nos. 3 through 8 (Sequence Nos. I and II) have been constructed in accordance with the approved plans and specifications. In addition, JMH included a written request to discharge to pod nos. 5, 6, 7 and 8 in the amount of twenty six thousand six hundred sixty seven (26,667) gallons.

Upon completion of construction of pods nos. 1 and 2 (Sequence No. III), JMH will submit record drawings, for the Commissioner's review and written approval, documenting that pod nos. 1 and 2 have been constructed in accordance with the approved plans and specifications. In addition, the JMH will include a written request to discharge to pod nos. 1, 2, 3 and 4 in the amount of twenty three thousand

## DATA TRACKING AND TECHNICAL FACT SHEET

three hundred and thirty three (23,333) gallons per day. Upon the Commissioner's written approval, no further discharges to existing Infiltration Bed Nos. 2 and 3 are authorized.

The total permitted design flow for the engineered leaching system is fifty thousand (50,000) gallons per day. As such, although each sequence was constructed with a slightly higher hydraulic capacity (as noted above), the authorized discharge amounts will be:

Sequence I (construction of pod nos. 5, 6, 7 and 8; authorized discharge to pods 7 & 8): 13,334 gpd

Sequence II (construction of pod nos. 3 and 4; authorized discharge to pods 5 & 6): 13,333 gpd

Sequence III (construction of pod nos. 1 and 2; authorized discharge to pods 1, 2, 3 & 4): 23,333 gpd

### PERMIT FEES

Discharge Code 312000a Representing DSN 301-2 and 302-2 Annual Fee \$1,110

### PROJECT HISTORY

Application received on November 16, 2005 (renewal) and August 28, 2017 (modification)

Notice of Sufficiency: Sufficiency granted on March 30, 2010 by Consent Order No. WC 5506

Notice of Tentative Decision: published in Manchester Journal Inquirer on November 1, 2017. No public comments were received.

Final Determination issued on December 7, 2017

Plans and Specifications approved on December 14, 2017

Revised Plans and Specifications approved on June 26, 2018 (this approval incorrectly references an approval dated December 19, 2017; the correct date should have been December 14, 2017)