STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

March 11, 2024

Mr. Donny Groves
Director of Utilities
e-copy: donnygroves@townofchapelhilltn.gov
Town of Chapel Hill
PO BOX 157
4650 NASHVILLE HWY
CHAPEL HILL, TN 37034

Subject: **NPDES Permit No. TN0064670**
Town of Chapel Hill
Chapel Hill, Marshall County, Tennessee

Dear Mr. Groves:

In accordance with the provisions of the Tennessee Water Quality Control Act, Tennessee Code Annotated (T.C.A.), Sections 69-3-101 through 69-3-120, the Division of Water Resources hereby issues the enclosed NPDES Permit. The continuance and/or reissuance of this NPDES Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that a petition for permit appeal may be filed, pursuant to T.C.A. Section 69-3-105, subsection (i), by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at a formal public hearing whose appeal is based upon any of the issues that were provided to the commissioner in writing during the public comment period or in testimony at a formal public hearing on the permit application.

Additionally, for those permits for which the department gives public notice of a draft permit, any permit applicant or aggrieved person may base a permit appeal on any material change to conditions in the final permit from those in the draft, unless the material change has been subject to additional opportunity for public comment.

Any petition for permit appeal under this subsection (i) shall be filed with the Technical Secretary of the Water Quality, Oil and Gas Board within thirty (30) days after public notice of the commissioner's decision to issue or deny the permit. A copy of the filing should also be sent to TDEC's Office of General Counsel.

TDEC has activated a new email address to accept appeals electronically. If you wish to file an appeal, you may do so by emailing the appeal and any attachments to TDEC.Appeals@tn.gov. If you file an appeal electronically, you do not have to send a paper copy. If you have questions about your electronic filing, you can call (615) 532-0131. Electronic filing is encouraged, but not required.

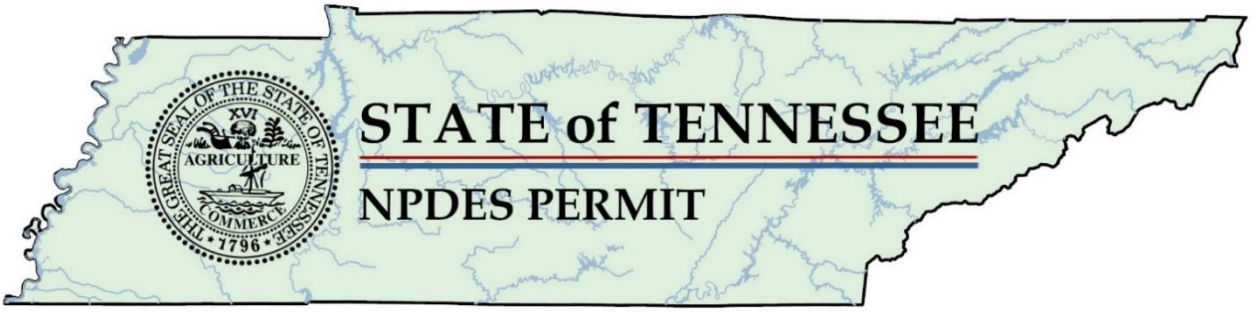
If you have questions, please contact the Columbia Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Mrs. Tricia Swaney at (615) 946-6803 or by E-mail at *Tricia.Swaney@tn.gov*.

Sincerely,

Vojin Janjić
Manager, Water-Based Systems

Enclosure

cc: Permit File
Columbia Environmental Field Office
Ms. Madison McLaughlin, J.R. Wauford & Company, madisonm@jrwauford.com
Mr. Bryan Brooks, Town of Chapel Hill, Bryanbrooks@townofchapelhilltn.gov
Mr. J. Greg Davenport, P.E., President, J.R. Wauford & Company Consulting Engineers, Inc., gregd@jrwauford.com
Mr. Danny Bingham, Town Administrator, Chapel Hill Water System, dannybingham@townofchapelhilltn.gov
Mr. Phillip Dye, Town Recorder, Town of Chapel Hill, phillipdye@townofchapelhilltn.gov



Authorization to Discharge Under the National Pollutant Discharge Elimination System (NPDES) Permit Number TN0064670

Issued by

Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.)

Permittee:	**Town of Chapel Hill** **Chapel Hill STP**
is authorized to discharge:	treated municipal wastewater using aerated lagoon, two cells in series, with chlorination, via sodium hypochlorite, prior to discharge to Outfall 001. (Permit also authorizes increase in design flow from 0.17 to 0.33 MGD and replacement of lagoon treatment with Sequencing Batch Reactor treatment)
from a facility located at:	Highway 99 (near Henry Horton State Park), Chapel Hill, Marshall County, Tennessee
to receiving waters named:	Duck River at mile 185.5

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on:	**April 1, 2024**
This permit shall expire on:	**March 31, 2029**
Issuance date:	**March 11, 2024**

for Jennifer Dodd
Director

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PART 1

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.1. NUMERIC AND NARRATIVE EFFLUENT LIMITATIONS

1.1.1. Numeric Limitations – 0.17 MGD Lagoon Facility

Town of Chapel Hill is authorized to discharge treated municipal wastewater from Outfall 001 to Duck River at mile 185.5 from a treatment facility with a current design capacity of 0.17 MGD. Discharge from Outfall 001 shall be limited and monitored by the permittee as specified below:

Description: External Outfall, Number: 001, Monitoring: Effluent Gross, Season: All Year							
Code	**Parameter**	**Qualifier**	**Value**	**Unit**	**Sample Type**	**Monitoring Frequency**	**Statistical Base**
00300	Oxygen, dissolved (DO)	>=	1.0	mg/L	Grab	Five Per Week	Instantaneous Minimum
00310	BOD, 5-day, 20 C	<=	30	mg/L	Composite	Weekly	Monthly Average
00310	BOD, 5-day, 20 C	<=	40	mg/L	Composite	Weekly	Weekly Average
00310	BOD, 5-day, 20 C	<=	45	mg/L	Composite	Weekly	Daily Maximum
00310	BOD, 5-day, 20 C	<=	43	lb/d	Composite	Weekly	Monthly Average
00310	BOD, 5-day, 20 C	<=	57	lb/d	Composite	Weekly	Weekly Average
00310	BOD, 5-day, 20 C	<=	64	lb/d	Composite	Weekly	Daily Maximum
00400	pH	>=	6.0	SU	Grab	Five Per Week	Minimum
00400	pH	<=	9.0	SU	Grab	Five Per Week	Maximum
00530	Total Suspended Solids (TSS)	<=	100	mg/L	Composite	Weekly	Monthly Average
00530	Total Suspended Solids (TSS)	<=	110	mg/L	Composite	Weekly	Weekly Average
00530	Total Suspended Solids (TSS)	<=	120	mg/L	Composite	Weekly	Daily Maximum
00530	Total Suspended Solids (TSS)	<=	142	lb/d	Composite	Weekly	Monthly Average
00530	Total Suspended Solids (TSS)	<=	156	lb/d	Composite	Weekly	Weekly Average
00530	Total Suspended Solids (TSS)	<=	170	lb/d	Composite	Weekly	Daily Maximum

Description: External Outfall, Number: 001, Monitoring: Effluent Gross, Season: All Year							
Code	**Parameter**	**Qualifier**	**Value**	**Unit**	**Sample Type**	**Monitoring Frequency**	**Statistical Base**
00545	Settleable Solids	<=	1.0	mL/L	Composite	Weekly	Daily Maximum
00600	Nitrogen, total (as N)	Report	-	mg/L	Composite	Quarterly	Daily Maximum
00600	Nitrogen, total (as N)	Report	-	lb/d	Composite	Quarterly	Daily Maximum
00665	Phosphorus, total (as P)	Report	-	lb/d	Composite	Quarterly	Daily Maximum
00665	Phosphorus, total (as P)	Report	-	mg/L	Composite	Quarterly	Daily Maximum
50050	Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
50050	Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
50060	Chlorine, total residual (TRC)	<=	2.0	mg/L	Grab	Five Per Week	Daily Maximum
51040	E. coli	<=	126	mg/L	Grab	Weekly	Monthly Geometric Mean
51040	E. coli	<=	410	#/100mL	Grab	Weekly	Daily Maximum
81010	BOD, 5-day, % removal	>=	65	%	Composite	Weekly	Monthly Average Minimum
Influent Structure Monitoring: Raw Sewage Influent, INF1, Season: All Year, Limit Set Status: Active							
Code	**Parameter**	**Qualifier**	**Value**	**Unit**	**Sample Type**	**Monitoring Frequency**	**Statistical Base**
00310	BOD, 5-day, 20 C	Report	-	mg/L	Grab	Weekly	Daily Maximum
00310	BOD, 5-day, 20 C	Report	-	mg/L	Grab	Weekly	Monthly Average
50050	Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
50050	Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum

General MyTDEC Forms Report Requirements*	
Bypass of Treatment Facility	See Section 1.3.5.1. and 2.3.5.
Anticipated Bypass of Treatment Facility	See Section 1.3.5.1. and 2.3.5.
Five-day Follow-up Noncompliance Report	See Sections 1.3.5.1. and 2.3.1.a.
Scheduled Reporting	See Section 2.3.1.b.

Notes:

The permittee shall achieve 65 % removal of BOD_5 on a monthly average basis. The permittee shall report all instances of releases, sanitary sewer overflows and/or bypasses. See **Part 2.3.2(a)** for the definition of sanitary sewer overflow and **Part 1.3.5** for reporting requirements.

Rows in blue represent the parameter limits that will change post-construction.

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

See **Part 1.2.3** for test procedures.

See below for percent removal calculations.

The permittee may collect more *E. coli* samples than specified as the monitoring frequency in the permit. Samples may not be collected at intervals of less than 12 hours.

Total residual chlorine (TRC) monitoring shall be applicable when chlorine, bromine, or any other oxidants are added. The acceptable methods for analysis of TRC are any methods specified in Title 40 CFR § 136 as amended, so long as the requirements of Tennessee Rule 0400-40-03-.05(8) are met. The method detection limit (MDL) should be determined in accordance with 40 CFR § 136 as amended, Appendix B. The MDL for TRC shall not exceed 0.05 mg/l unless the permittee demonstrates that its MDL is higher. The permittee shall retain the documentation that justifies the MDL and have it available for review upon request. In cases where the permit limit is less that the MDL, the reporting of TRC at less than the MDL shall be interpreted to constitute compliance with the permit.

1.1.2. Numeric Limitations – 0.33 MGD Sequencing Batch Reactor Facility

In 2021, the Town of Chapel Hill submitted engineering plans to the division to construct a new 0.33 MGD, using a sequencing batch reactor (SBR) mechanical treatment plant to replace the current 0.17 MGD plant. Once construction is complete, the Town of Chapel Hill is authorized to discharge treated municipal wastewater from Outfall 001 to Duck River at mile 185.5, which is the same location as the current discharge. Discharge from Outfall 001 will consist of treated municipal wastewater from the facility with the new design capacity of 0.33 MGD. Discharge from Outfall 001 shall be limited and monitored by the permittee as specified below:

Description: External Outfall, Number: 001, Monitoring: Effluent Gross, Season: All Year							
Code	**Parameter**	**Qualifier**	**Value**	**Unit**	**Sample Type**	**Monitoring Frequency**	**Statistical Base**
00300	Oxygen, dissolved (DO)	>=	1.0	mg/L	Grab	Five Per Week	Instantaneous Minimum
00310	BOD, 5-day, 20 C	<=	15.6	mg/L	Composite	Weekly	Monthly Average
00310	BOD, 5-day, 20 C	<=	20	mg/L	Composite	Weekly	Weekly Average

Description: External Outfall, Number: 001, Monitoring: Effluent Gross, Season: All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00310	BOD, 5-day, 20 C	<=	23.3	mg/L	Composite	Weekly	Daily Maximum
00310	BOD, 5-day, 20 C	<=	43	lb/d	Composite	Weekly	Monthly Average
00310	BOD, 5-day, 20 C	<=	57	lb/d	Composite	Weekly	Weekly Average
00400	pH	>=	6.0	SU	Grab	Five Per Week	Minimum
00400	pH	<=	9.0	SU	Grab	Five Per Week	Maximum
00530	Total Suspended Solids (TSS)	<=	30	mg/L	Composite	Weekly	Monthly Average
00530	Total Suspended Solids (TSS)	<=	40	mg/L	Composite	Weekly	Weekly Average
00530	Total Suspended Solids (TSS)	<=	45	mg/L	Composite	Weekly	Daily Maximum
00530	Total Suspended Solids (TSS)	<=	83	lb/d	Composite	Weekly	Monthly Average
00530	Total Suspended Solids (TSS)	<=	110	lb/d	Composite	Weekly	Weekly Average
00530	Total Suspended Solids (TSS)	<=	124	lb/d	Composite	Weekly	Daily Maximum
00545	Settleable Solids	<=	1.0	mL/L	Composite	Once Per Weekly Discharge	Daily Maximum
00600	Nitrogen, total (as N)	Report	-	mg/L	Composite	Quarterly	Daily Maximum
00600	Nitrogen, total (as N)	Report	-	lb/d	Composite	Quarterly	Daily Maximum
00665	Phosphorus, total (as P)	Report	-	lb/d	Composite	Quarterly	Daily Maximum
00665	Phosphorus, total (as P)	Report	-	mg/L	Composite	Quarterly	Daily Maximum
50050	Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
50050	Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
50060	Chlorine, total residual (TRC)	<=	2.0	mg/L	Grab	Five Per Week	Daily Maximum

Description: External Outfall, Number: 001, Monitoring: Effluent Gross, Season: All Year							
Code	**Parameter**	**Qualifier**	**Value**	**Unit**	**Sample Type**	**Monitoring Frequency**	**Statistical Base**
51040	E. coli	<=	126	mg/L	Grab	Weekly	Monthly Geometric Mean
51040	E. coli	<=	410	#/100mL	Grab	Weekly	Daily Maximum
Code	**Parameter**	**Qualifier**	**Value**	**Unit**	**Sample Type**	**Monitoring Frequency**	**Statistical Base**
81010	BOD, 5-day, % removal	>=	85	%	Calculated	Weekly	Monthly Average Minimum
81010	BOD, 5-day, % removal	>-=	40	%	Calculated	Weekly	Daily Minimum
81011	TSS, % removal	>=	85	%	Calculated	Weekly	Monthly Average Minimum
81011	TSS, % removal	>=	40	%	Calculated	Weekly	Daily Minimum
Influent Structure Monitoring: Raw Sewage Influent, INF1, Season: All Year							
Code	**Parameter**	**Qualifier**	**Value**	**Unit**	**Sample Type**	**Monitoring Frequency**	**Statistical Base**
00310	BOD, 5-day, 20 C	Report	-	mg/L	Grab	Weekly	Daily Maximum
00310	BOD, 5-day, 20 C	Report	-	mg/L	Grab	Weekly	Monthly Average
50050	Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
50050	Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
00530	Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Weekly	Daily Maximum
00530	Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Weekly	Monthly Average

General MyTDEC Forms Report Requirements*	
Bypass of Treatment Facility	See Section 1.3.5.1. and 2.3.5.
Anticipated Bypass of Treatment Facility	See Section 1.3.5.1. and 2.3.5.
Five-day Follow-up Noncompliance Report	See Sections 1.3.5.1. and 2.3.1.a.
Scheduled Reporting	See Section 2.3.1.b.

* Each event shall be reported via MyTDEC Forms.

Notes:

The permittee shall achieve 85 % removal of BOD_5 and TSS on a monthly average basis, and 40% removal of BOD5 and TSS on a daily basis (for the SBR treatment system). The permittee shall report all instances of releases, sanitary sewer overflows and/or bypasses. See **Part 2.3.2(a)** for the definition of sanitary sewer overflow and **Part 1.3.5** for reporting requirements.

Rows in blue represent the parameter limits that will change post-construction.

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

See **Part 1.2.3** for test procedures.

See below for percent removal calculations.

The permittee may collect more samples than specified as the monitoring frequency in the permit. Samples may not be collected at intervals of less than 12 hours. For the purpose of determining the geometric mean, individual samples having an *E. coli* group concentration of less than 1 per 100 mL shall be considered as having a concentration of 1 per 100 mL. In addition, the concentration of the *E. coli* group in any individual sample shall not exceed a specified maximum amount.

Total residual chlorine (TRC) monitoring shall be applicable when chlorine, bromine, or any other oxidants are added. The acceptable methods for analysis of TRC are any methods specified in Title 40 CFR § 136 as amended, so long as the requirements of Tennessee Rule 0400-40-03-.05(8) are met. The method detection limit (MDL) should be determined in accordance with 40 CFR § 136 as amended, Appendix B. The MDL for TRC shall not exceed 0.05 mg/l unless the permittee demonstrates that its MDL is higher. The permittee shall retain the documentation that justifies the MDL and have it available for review upon request. In cases where the permit limit is less that the MDL, the reporting of TRC at less than the MDL shall be interpreted to constitute compliance with the permit.

For BOD_5 and TSS, the treatment facility shall demonstrate a minimum of 85% removal efficiency on a monthly average basis. This is calculated by determining an average of all daily influent concentrations and comparing this to an average of all daily effluent concentrations. The formula for this calculation is as follows:

$$\left(1 - \frac{average\ of\ daily\ effluent\ concentrations}{average\ of\ daily\ influent\ concentrations}\right) * 100\% = \%\ removal$$

This treatment facility will also demonstrate 40% daily minimum removal of BOD_5 and TSS based on each daily composite sample. The formula for this calculation is as follows:

$$\left(1 - \frac{daily\ effluent\ concentration}{daily\ influent\ concentration}\right) * 100\% = \%\ removal$$

1.1.3. Collection System Requirements

Town of Chapel Hill is authorized to operate a sewage collection system. Operation and discharges from the collection system shall be limited and monitored by the permittee as specified below:

Code	Monitoring	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
51925	Dry Weather	SSO, Dry Weather	<=	0	occur/mo	Occurrences	Continuous	Monthly Total
51926	Wet Weather	SSO, Wet Weather	<=	0	occur/mo	Occurrences	Continuous	Monthly Total

Report via NetDMR. See sections **1.3.1.** and **1.3.5.2.**

Collection System MyTDEC Forms Report Requirements*	
Sanitary Sewer Overflow (SSO, Dry Weather)	See Section 1.3.5.1.
Sanitary Sewer Overflow (SSO, Wet Weather)	See Section 1.3.5.1.
Release (Dry Weather)	See Section 1.3.5.1.
Release (Wet Weather)	See Section 1.3.5.1.
Five-day Follow-up Noncompliance Report	See Sections 1.3.5.1. and 2.3.1.

* Each event shall be reported via MyTDEC Forms.

1.1.4. Narrative Conditions

Due Date	Narrative Requirement
120 days from permit effective date	The permittee shall submit the results of an Industrial Waste Survey (IWS) to the Division of Water Resources, Pretreatment Section within 120 days of the effective date of this permit, unless such a survey has been submitted within 3 years of the effective date. If an IWS has been submitted within the past 3 years, the permittee shall notify the Division of the date when the IWS was previously submitted to the Division. The IWS shall be submitted to the following email address: DWRWater.Compliance@tn.gov.

The authorized discharge shall not:

- Result in distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits, or sludge banks of such size or character as may be detrimental to fish and aquatic life.

- Result in total suspended solids, turbidity, or color in such amounts or character that will result in any objectionable appearance to the receiving water, considering the nature and location of the water.
- Contain pollutants in quantities that will be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.

Sludge or any other material removed by any treatment works must be disposed of in a manner that prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, Tennessee Code Annotated (Tenn. Code Ann.) §68-31-101 et seq. and the Tennessee Hazardous Waste Management Act, Tenn. Code Ann. §68-46-101 et. seq.

1.2. MONITORING PROCEDURES

1.2.1. Representative Sampling

Samples and measurements taken in compliance with the monitoring requirements specified herein shall be representative of the volume and nature of the monitored discharge and shall be taken after treatment and prior to mixing with uncontaminated stormwater runoff or the receiving stream. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed and calibrated by a qualified source at least once every 12 months[1], and maintained to ensure that the accuracy of the measurements is consistent with accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of plus or minus 10% from the true discharge rates throughout the range of expected discharge volumes.

Composite samples must be proportioned by flow at the time of sampling. Aliquots may be collected manually or automatically. The sample aliquots must be maintained at ≤ 6°C during the compositing period, or as otherwise specified in 40 CFR §136 or in the method.

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of the monitored discharge, and shall be taken at the following location(s):

[1] The Division expects for permittees to meet EPA's guidance on proper operation and maintenance of flow measurement devices, as stated in the NPDES Compliance Inspection Manual.

Influent samples must be collected prior to mixing with any other wastewater being returned to the head of the plant, such as sludge return. Those systems with more than one influent line must collect samples from each and proportion the results by the flow from each line.

Effluent samples must be representative of the wastewater being discharged and collected prior to mixing with any other discharge or the receiving stream. This can be a different point for different parameters but must be after all treatment for that parameter or all expected changes. Specifically:

a) The chlorine residual must be measured after the chlorine contact chamber and any dechlorination. It may be to the advantage of the permittee to measure at the end of any long outfall lines.

b) Samples for *E. coli* can be collected at any point between completion of disinfection and the actual discharge.

c) The dissolved oxygen (DO) can drop in the outfall line; therefore, DO measurements are required at the discharge end of outfall lines greater than one mile long. Systems with outfall lines less than one mile may measure dissolved oxygen as the wastewater leaves the treatment facility. For systems with dechlorination, DO must be measured after this step and as close to the end of the outfall line as possible.

d) Total suspended solids (TSS) and settleable solids can be collected at any point after the final clarifier.

e) Biomonitoring tests (if required) shall be conducted on final effluent.

1.2.2. Sampling Frequency

The permittee should report "No Discharge" on Discharge Monitoring Reports (DMRs) only if a permitted outfall does not discharge at any time during the monitoring period. If the outfall discharges effluent at any time during the monitoring period, the permittee must provide at least one sampling result from the effluent of that outfall.

If the required monitoring frequency is once per month or 1/month, the monitoring period is one month. If the discharge occurs during only one day in that period, the permittee must sample on that day and report the results of analyses accordingly.

1.2.3. Test Procedures

a) Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304 (h) of the Clean Water Act (the "Act"), as amended, under which such procedures may be required.

b) Unless otherwise noted in the permit, all pollutant parameters shall be determined using sufficiently sensitive methods in Title 40 CFR § 136, as amended, and promulgated pursuant to Section 304 (h) of the Act. The chosen methods must be sufficiently sensitive as required in state rule 0400-40-03-.05(8).

c) If the minimum level of quantification (ML) for all methods available in accordance with 40 CFR § 136 are above the stated permit limit or applicable water quality criteria for that parameter, then the method with the lowest ML shall be used.

d) Where the analytical results are below the method detection limit (MDL), the permittee shall report the actual laboratory MDL and ML values. See **Section 1.3.6.** for instructions regarding reporting less than detection.

e) When there is no analytical method that has been approved under 40 CFR §136 or required under 40 CFR chapter I, subchapter N or O, and a specific method is not otherwise required by the Director, the permittee may use any suitable method but shall provide a description of the method. When selecting a suitable method, factors such as a method's precision, accuracy, or resolution must be considered when assessing the performance of the method.

1.2.4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

i. The date, exact place, and time of sampling or measurements;
ii. The individual(s) who performed the sampling or measurements;
iii. The date analyses were performed;
iv. The individual(s) who performed the analyses;
v. The laboratory where the analyses were performed;
vi. The analytical techniques or methods used; and
vii. The results of such analyses.

1.2.5. Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

1.3. REPORTING

1.3.1. Monitoring Results

Monitoring results shall be recorded monthly and submitted monthly on Discharge Monitoring Reports (DMRs) using EPA's NetDMR website. The first DMR is due on the 15th of the month following permit effectiveness. Subsequent DMRs shall be submitted through NetDMR no later than 15 days after the completion of the reporting period. In compliance with the Federal NPDES Electronic Reporting Rule, DMRs may not be submitted via email under any circumstances.

Discharge Monitoring Reports and any other information or report must be signed and certified by a responsible corporate officer as defined in Tennessee Rules, Chapter 0400-40-05-.07(2)(i), a general partner or proprietor, a principal municipal executive officer or ranking elected official, or his or her duly authorized representative. Such authorization must be submitted in writing and must explain the duties and responsibilities of the authorized representative.

In the event that electronic reporting is unavailable, the permittee shall comply with reporting conditions provided in **Section 1.7**.

1.3.2. Additional Monitoring by Permittee

If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR § 136, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or other reporting form specified by the Commissioner. Such increased frequency shall also be indicated.

1.3.3. Falsifying Results and/or Reports

Knowingly making any false statement on any report required by this permit or falsifying any result may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act, as amended, and in § 69-3-115 of the Tennessee Water Quality Control Act.

1.3.4. Monthly Report of Operation

Monthly Operational Reports (MORs) shall be submitted by the 15th day of the month following data collection. Reports shall be submitted by one of the following methods, presented below in order of preference:

1) Using MyTDEC Forms, if available.

2) Submitting both a signed and certified copy in pdf format, uploaded as an attachment to NetDMR, *and* a copy of the native format spreadsheet file emailed to DWRWW.Report@tn.gov and the Columbia EFO:

Chattanooga	TDEC.Chattanooga.EFO@tn.gov
Columbia	TDEC.Columbia.EFO@tn.gov
Cookeville	TDEC.Cookeville.EFO@tn.gov
Jackson	TDEC.Jackson@tn.gov
Johnson City	TDEC.JohnsonCity.EFO@tn.gov
Knoxville	TDEC.KEFO.DWRPermits@tn.gov
Memphis	TDEC.Memphis.EFO@tn.gov
Nashville	DWR.NEFO@tn.gov

3) Submitting signed and certified forms to the EFO at the following address:

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
Columbia Environmental Field Office
1421 Hampshire Pike
Columbia, Tennessee 38401

1.3.5. Sanitary Sewer Overflow, Release, and Bypass Reporting

1.3.5.1. Event Report Requirements

For the purpose of this section, "events" are known as instances of sanitary sewer overflows, releases, upsets, and bypasses. These events shall be reported through MyTDEC Forms according to the following conditions:

a) Events that are not a threat to human health and the environment shall be reported using MyTDEC Forms no later than 15 days following the completion of the DMR reporting period.

b) Events that could cause a threat to human health or the environment, as defined in **Section 2.3.1.a**., shall be reported using MyTDEC Forms no later than 5 days after becoming aware of the non-compliance.

In both cases, the event report must contain the following:

i. Start date;
ii. Estimated duration in hours;
iii. Estimated volume in gallons;
iv. Type of event;
v. Type of structure (e.g., manhole);
vi. Types of human health and environmental impacts~~;~~
vii. Location (i.e., latitude and longitude);
viii. The name of receiving water (if applicable);
ix. Description of the cause;
x. The steps being taken to correct, reduce, eliminate, and prevent recurrence of the noncompliance; and
xi. The next downstream pump/lift station using the permittee's naming conventions.

In the event that MyTDEC Forms is not functioning, the permittee shall comply with reporting conditions provided in **Section 1.7**.

1.3.5.2. DMR Report Requirements

On the DMR, the permittee must separately report:

i. The total number of wet-weather sanitary sewer overflows for the reporting month; and
ii. The total number of dry-weather sanitary sewer overflows for the reporting month.

On the DMR, sanitary sewer overflows are coded "SSO, Dry Weather" and "SSO, Wet Weather". Each discrete location of a sanitary sewer overflow shall be reported as a separate value.

1.3.6. Reporting Less Than Detection; Reporting Significant Figures

For the purpose of evaluating compliance with the permit limits established herein, where certain limits are below the minimum level (ML) of 40 CFR § 136 approved analytical methods, compliance will be demonstrated when a non-detect result is obtained using the most sensitive method available. The results of

non-detect analyses, in this case, shall be reported as Below Detection Limit (BDL) or "NODI = B" in NetDMR. Reporting examples are provided below.

Reporting Example 1: If the permit limit is 0.02 mg/L with a method detection limit (MDL) of 0.05 mg/L and no detection is shown, the permittee must report "BDL" or "NODI = B" on DMRs in NetDMR. Whenever "BDL" or "NODI = B" is reported, the actual MDL must be reported in the DMR comments or in an attachment submitted in NetDMR.

Reporting Example 2: If the permit limit is 0.02 mg/L with an MDL of 0.05 mg/L and detection is shown, the actual detected value must be reported.

Reporting Example 3: If the permit limit is 0.02 mg/L with an MDL of 0.01 mg/L and no detection is shown, the permittee must report less than MDL (<0.01 mg/L in this case).

For purposes of calculating averages, zero may be assigned for values less than the MDL, the numeric value of the MDL may be assigned for values between the MDL and the ML. If the average value is less than the MDL, the permittee must report "less than {numeric value of the MDL}" and if the average value is less than the ML, the permittee must report "less than {numeric value of the ML}." If a value is equal to or greater than the ML, the permittee must report and use the actual value. The resulting average value must be compared to the compliance level, the ML, in assessing compliance.

Reported results are to correspond to the number of significant figures (decimal places) set forth in the permit conditions. The permittee shall round values, if allowed by the method of sample analysis, using a uniform rounding convention adopted by the permittee.

1.3.7. Outlier Data

Outlier data include analytical results that are probably false. The validity of results is based on operational knowledge and a properly implemented quality assurance program. False results may include laboratory artifacts, potential sample tampering, broken or suspect sample containers, sample contamination or similar demonstrated quality control flaw.

Outlier data are identified through a properly implemented quality assurance program, and according to ASTM standards (e.g. Grubbs Test, 'h' and 'k' statistics). Furthermore, outliers should be verified, corrected, or removed based on further inquiries into the matter. If an outlier was verified (through repeated testing

and/or analysis), it should remain in the preliminary data set. If an outlier resulted from a transcription or similar clerical error, it should be corrected and subsequently reported.

Therefore, only if an outlier was associated with problems in the collection or analysis of the samples and as such does not conform with the Guidelines Establishing Test Procedures for the Analysis of Pollutants (40 CFR §136), can it be removed from the data set and not reported on DMRs. Otherwise, all results (including monitoring of pollutants more frequently than required at the location(s) designated, using approved analytical methods as specified in the permit) should be included in the calculation and reporting of the values required in the DMR form. The permittee should use the "comment" section in NetDMR to explain any potential outliers or dubious results.

1.4. COMPLIANCE WITH SECTION 208

The limits and conditions in this permit shall require compliance with an area-wide waste treatment plan (208 Water Quality Management Plan) where such approved plan is applicable.

1.5. REOPENER CLAUSE

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 307(a)(2), and 405(d)(2)(D) of the Clean Water Act, as amended, if the effluent standard, limitation, or sludge disposal requirement so issued or approved:

a) Contains different conditions or is otherwise more stringent than any condition in the permit; or

b) Controls any pollutant or disposal method not addressed in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

1.6. SCHEDULE OF COMPLIANCE

Full compliance and operational levels shall be attained from the effective date of this permit, except for conditions under compliance schedules. See **Section 1.1.** for numeric and narrative requirements.

1.7. ELECTRONIC REPORTING

This permit requires the submission of forms developed by the Director in order for a person to comply with certain requirements, including, but not limited to, making reports, submitting monitoring results, and applying for permits. The Director may make these forms available electronically and, if submitted electronically, then that electronic submission shall comply with the requirements of Chapter 0400-01-40. Electronic submission is required when available unless waived by the Commissioner in accordance with 40 C.F.R. § 127.15.

In the event of large-scale emergencies and/or prolonged electronic reporting system outages, an episodic electronic reporting waiver may be granted by the Commissioner in accordance with 40 CFR § 127.15. A request for a deadline extension or episodic electronic reporting waiver should be submitted to DWRWater.Compliance@tn.gov, in compliance with the Federal NPDES Electronic Reporting Rule.

If an episodic electronic reporting waiver is granted, reports with wet-ink original signatures shall be mailed to the following address:

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
COMPLIANCE & ENFORCEMENT UNIT
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

For purposes of determining compliance with this permit, data provided to the Division electronically is legally equivalent to data submitted on signed and certified forms. A copy must be retained for the permittee's files.

PART 2

2. GENERAL PERMIT REQUIREMENTS

2.1. GENERAL PROVISIONS

2.1.1. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

2.1.2. Duty to Reapply

The permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Division Director no later than 180 days prior to the expiration date. Such forms shall be properly signed and certified.

2.1.3. Proper Operation and Maintenance

a) The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances, including but not limited to collection and conveyance systems) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Low pressure pumps, low pressure tanks, septic tank effluent pumps (STEP), STEP tanks, and septic tank effluent gravity tanks are integral to the treatment and conveyance of sewage in a low-pressure system design, and shall be owned or under control of the municipality, other body of government, public utility district, or a privately-owned public utility demonstrating lawful jurisdiction over the service area. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

b) Dilution water shall not be added to comply with effluent requirements to achieve BCT, BPT, BAT, or other technology based effluent limitations such as those established in Tennessee Rule 0400-40-05-.09.

2.1.4. Duty to Provide Information

The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

2.1.5. Right of Entry

The permittee shall allow the Director, the Regional Administrator of the U.S. Environmental Protection Agency, or their authorized representatives, upon the presentation of credentials, to:

a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records shall be kept under the conditions of this permit;

b) Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this permit;

c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d) Sample or monitor at reasonable times for the purposes of assuring permit compliance or as otherwise authorized by the Director.

2.1.6. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Water Pollution Control Act, as amended, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the Division's offices or via the Department's dataviewer webpage. As required by the Federal Act, effluent data shall not be considered confidential.

2.1.7. Treatment Facility Failure (Industrial Sources)

The permittee, in order to maintain compliance with this permit, shall control production, all discharges, or both, upon reduction, loss, or failure of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in such situations as the reduction, loss, or failure of the primary source of power.

2.1.8. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to

private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

2.1.9. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

2.1.10. Other Information

If the permittee becomes aware of failure to submit any relevant facts in a permit application, or of submission of incorrect information in a permit application or in any report to the Director, then the permittee shall promptly submit such facts or information.

2.2. CHANGES AFFECTING THE PERMIT

2.2.1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as defined in Rule 0400-40-05-.02;

b) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit nor to notification requirements under 40 CFR § 122.42(a)(1); or

c) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices.

2.2.2. Permit Modification, Revocation, or Termination

a) This permit may be modified, revoked and reissued, or terminated for cause as described in 40 CFR § 122.62 and § 122.64, Federal Register, Volume 49, No. 188 (Wednesday, September 26, 1984), as amended. Causes for such permit action include but are not limited to the following:

    i. Violation of any terms or conditions of the permit;

ii. Obtaining a permit by misrepresentation or failure to disclose fully all relevant facts; and

iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

b) The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.

c) If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established for any toxic pollutant under Section 307(a) of the Federal Water Pollution Control Act, as amended, the Director shall modify or revoke and reissue the permit to conform to the prohibition or to the effluent standard, providing that the effluent standard is more stringent than the limitation in the permit for the toxic pollutant. The permittee shall comply with these effluent standards or prohibitions within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified or revoked and reissued to incorporate the requirement.

d) The filing of a request by the permittee for a modification, revocation, reissuance, termination, or notification of planned changes or anticipated noncompliance does not halt any permit condition.

2.2.3. Change of Ownership

Except as provided in Tennessee Rule Chapter 0400-40-05-.06(5)(a) or (b), this permit may be transferred to another party (provided there are neither modifications to the facility or its operations, nor any other changes which might affect permit limits and conditions contained in the permit) by the permittee if:

a) The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;

b) The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and

c) The permittee shall provide the following information to the Director in the permittee's formal notice of intent to transfer ownership:

i. The permit number of the subject permit;
ii. The effective date of the proposed transfer;
iii. The name, address, and contact information of the transferor;
iv. The name, address, and contact information of the transferee;
v. The names of the responsible parties for both the transferor and transferee;
vi. A statement that the transferee assumes responsibility for the subject permit;
vii. A statement that the transferor relinquishes responsibility for the subject permit;
viii. The signatures of the responsible parties for both the transferor and transferee pursuant to the signatory requirements of subparagraph (i) of Rule 0400-40-05-.07(2); and
ix. A statement regarding any proposed modifications to the facility, its operations, or any other changes, which might affect the permit, limits and conditions contained in the permit.

2.2.4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice, the original address of the permittee will be assumed to be correct.

2.3. NONCOMPLIANCE

2.3.1. Reporting of Noncompliance

a) 24-hour Reporting:

In the case of any noncompliance, or any release (whether or not caused by improper operation and maintenance), which could cause a threat to human health or the environment, the permittee shall:

i. Report the noncompliance or release to the Commissioner within 24 hours from the time the permittee becomes aware of the circumstances. Such noncompliance or release includes, but is not limited to, any unanticipated bypass exceeding any effluent limitation, any upset exceeding any effluent limitation, and violations of any maximum daily effluent limitation identified in the permit as requiring 24-hour reporting. (The EFO should be contacted for names and phone numbers of the environmental response team.)

ii. Submit a written report within five days of the time the permittee becomes aware of the noncompliance. The permittee shall provide the following information:

1. A description of and the cause of the noncompliance or release;

2. The period of noncompliance or release, including start and end dates and times i.e. duration or, if not corrected, the anticipated time the noncompliance or release is expected to continue;

3. The steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance or release; and

4. For POTWs or domestic wastewater treatment plants, reporting any dry weather overflow, wet weather overflow, dry weather release, wet weather release, combined sewer overflow, or bypass, this written report must also include the following:

   I. Type of event;
   II. Type of sanitary sewer overflow, release, or bypass structure (e.g., manhole, combined sewer overflow outfall);
   III. Estimated volume (gallons);
   IV. Types of human health and environmental impacts;
   V. Location (latitude and longitude);
   VI. Estimated duration (hours);
   VII. The next downstream pump station (for sanitary sewer overflows and releases only); and
   VIII. The name of receiving water (if applicable).

iii. Industrial dischargers that do not treat domestic waste shall comply with subpart a) ii. 4. of this subparagraph with respect to bypasses only.

iv. For sanitary sewer overflows, releases, bypasses, upsets and washouts, the report required by a) ii. Shall be submitted electronically via MyTDEC Forms.

b) Other Noncompliance.

i. All permittees shall report each instance of noncompliance or any release (whether or not caused by improper operation and maintenance), not reported under sub-part a) at the time of submitting the next routine

monitoring report, including all information required by sub-parts a) ii. 1-3.

ii. In addition to the information required by part i of this sub-part, POTWs and domestic wastewater treatment plants shall submit a written report containing the information required by sub-part a) ii. 4. If these events are caused by an extreme weather event, the Commissioner may provide a written waiver of some or all of these reporting requirements.

iii. In addition to the information required by sub-part i, industrial dischargers shall submit a written report of bypasses containing the information required by sub-part a) i. 4. This part does not relieve industrial dischargers from any applicable reporting requirements of 40 C.F.R. Part 117 (2021) and 40 C.F.R. Part 302 (2021).

2.3.2. Sanitary Sewer Overflows and Releases

a) For publicly owned treatment works (POTW) or domestic wastewater treatment plants, sanitary sewer overflows, including dry-weather overflows and wet weather overflows, are prohibited.

b) Releases caused by improper operation and maintenance, which is to be determined by the Commissioner based on the totality of the circumstances, are prohibited.

c) The permittee shall operate the collection, transmission, and treatment system so as to avoid sanitary sewer overflows and releases due to improper operation or maintenance. A "release" may be due to improper operation or maintenance of the collection system or may be due to other cause(s).

d) The permittee shall take all reasonable steps to minimize any adverse impact associated with sanitary sewer overflows and releases.

e) No new or additional flows shall be added upstream of any point in the collection, transmission, or treatment system that experiences greater than 5 sanitary sewer overflows and/or releases per year[2] or would otherwise

[2] This includes dry weather overflows, wet weather overflows, dry weather releases and wet weather releases.

overload any portion of the system. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after:

1) An authorized representative of the Commissioner of the Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in accordance with accepted engineering practices for correction of the problem;
2) The correction work is underway; and
3) The cumulative, peak-design flows potentially added from new connections and line extensions upstream of any chronic sanitary sewer overflow or release point are less than or proportional to the amount of inflow and infiltration removal documented upstream from that point.

The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the environmental engineering field and reported in an attachment to the permittee's DMR and uploaded to NetDMR. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations.

f) In the event that chronic sanitary sewer overflows or releases have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium of the actions identified in this paragraph, the permittee may request a meeting with Division EFO staff to petition for a waiver based on mitigating evidence.

g) For industrial dischargers, the discharge of pollutants from any location other than a permitted outfall is prohibited.

2.3.3. Upset

a) An upset shall constitute an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i. An upset occurred and that the permittee can identify the cause(s) of the upset;
ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;

iii. The permittee submitted information required under "Reporting of Noncompliance" within 24 hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and

iv. The permittee complied with any remedial measures required under "Adverse Impact".

b) In any enforcement proceeding, the permittee seeking to establish the affirmative defense of an upset has the burden of proof.

2.3.4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2.3.5. Bypass

a) Bypasses (see subpart 4.1) are prohibited unless all the following conditions are met:

i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;

ii. There are no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

   a. For anticipated bypass, the permittee submits prior notice, if possible at least ten days before the date of the bypass, or

   b. For unanticipated bypass, the permittee submits notice of an unanticipated bypass within 24 hours from the time that the permittee becomes aware of the bypass.

b) Bypasses that do not cause effluent limitations to be exceeded may be allowed only if the bypass is necessary for essential maintenance to assure efficient operation. The permittee must sample and report the discharge during each

bypass to demonstrate that the bypass does not cause effluent limitations to be exceeded.

2.3.6. Washout

a) For domestic wastewater plants only, a "*washout*" shall be defined as loss of Mixed Liquor Suspended Solids (MLSS) of 30.00% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decreases due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to inflow and infiltration.

b) A washout is prohibited. If a washout occurs the permittee must report the incident to the Division in the appropriate EFO within 24 hours by telephone. A written submission must be provided within five days. The washout must be noted on that month's DMR. Each day of a washout is a separate violation.

2.4. LIABILITIES

2.4.1. Civil and Criminal Liability

Except as provided in permit conditions for "*Bypass*" (**Section 2.3.5**), "*Sanitary sewer overflows and Releases*" (**Section 2.3.2**), and "*Upset*" (**Section 2.3.3**), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including, but not limited to, fish kills and losses of aquatic life and/or wildlife as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2.4.2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or the Federal Water Pollution Control Act, as amended.

PART 3

3. PERMIT SPECIFIC REQUIREMENTS

3.1. CERTIFIED OPERATOR

The waste treatment facilities shall be operated under the supervision of a certified wastewater treatment operator, and the collection system shall be operated under the supervision of a certified collection system operator in accordance with the Water Environmental Health Act of 1984.

3.2. POTW PRETREATMENT PROGRAM GENERAL PROVISIONS

As an update of information previously submitted to the Division, the permittee will undertake the following activity:

a) The permittee shall submit the results of an Industrial Waste Survey (IWS) in accordance with Rule 0400-40-14-.08-(6)(b)1, including any industrial users (IU) covered under Section 301(i)(2) of the Act. As much information as possible must be obtained relative to the character and volume of pollutants contributed to the POTW by the IUs. This information will be submitted to the Division of Water Resources, Pretreatment Section within one hundred twenty (120) days of the effective date of this permit, unless such a survey has been submitted within 3 years of the effective date. Development of a pretreatment program may be required after completion of the industrial user review. All requirements and conditions of the pretreatment program are enforceable through the NPDES permit.

b) The permittee shall enforce Rule 0400-40-14-.05, "prohibited discharges". Pollutants introduced into the POTW by a non-domestic source shall not cause pass through or interference as defined in Rule 0400-40-14-.03. These general prohibitions and the specific prohibitions in this section apply to all non-domestic sources introducing pollutants into the POTW whether the source is subject to other National Pretreatment Standards or any state or local pretreatment requirements.

Specific prohibitions: Under no circumstances shall the permittee allow introduction of the following wastes into the POTW:

i. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint

of less than 140°F or 60°C using the test methods specified in 40 CFR § 261.21

ii. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0 unless the system is specifically designed to accommodate such discharges;

iii. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;

iv. Any pollutant, including oxygen-demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;

v. Heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40°C (104°F) unless the Division, upon request of the POTW, approves alternate temperature limits;

vi. Any priority pollutant in amounts that will contaminate the treatment works sludge;

vii. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

viii. Pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems; or

ix. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

c) The permittee shall notify the Division of any of the following changes in user discharge to the system no later than 30 days prior to change of discharge:

i. New introductions into such works of pollutants from any source which would be a new source as defined in Section 306 of the Act if such source were discharging pollutants;

ii. New introductions of pollutants into such works from a source which would be subject to Section 301 of the "Federal Water Quality Act as Amended" if it were discharging such pollutants; or

iii. A substantial change in volume or character of pollutants being introduced into such works by a source already discharging pollutants into such works at the time this permit is issued.

This notice will include information on the quantity and quality of the wastewater introduced by the new source into the POTW, and on any anticipated impact on the effluent discharged from such works. If this discharge necessitates a revision of the current NPDES permit or pass-through

guidelines, discharge by this source is prohibited until the Tennessee Division of Water Resources gives final authorization.

3.3. BIOSOLIDS MANAGEMENT PRACTICES

All sludge and/or biosolids use or disposal must comply with 40 CFR § 503 *et seq*. Biosolids shall be sampled and analyzed at a frequency dependent on the amount used annually.

Any facility that land applies non-exceptional quality biosolids must obtain an appropriate permit from the Division in accordance with Chapter 0400-40-15.

a) Reopener: If an applicable "acceptable management practice" or numerical limitation for pollutants in sewage sludge promulgated under Section 405(d)(2) of the Clean Water Act, as amended by the Water Quality Act of 1987, is more stringent than the sludge pollutant limit or acceptable management practice in this permit, or controls a pollutant not limited in this permit, this permit shall be promptly modified or revoked and reissued to conform to the requirements promulgated under Section 405(d)(2). The permittee shall comply with the limitations by no later than the compliance deadline specified in the applicable regulations as required by Section 405(d)(2) of the Clean Water Act.

b) Notice of change in sludge disposal practice: The permittee shall give prior notice to the Director of any change planned in the permittee's sludge disposal practice.

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF SOLID WASTE MANAGEMENT
Columbia Environmental Field Office
1421 Hampshire Pike
Columbia, Tennessee 38401
(931)380-3371

The current method of sludge disposal is to a municipal solid waste landfill (or co-composting facility). Disposal of sludge and/or biosolids at a municipal solid waste landfill (or co-composting facility) is controlled by the rules of the Tennessee Division of Solid Waste Management (DSWM) and Federal Regulations at 40 CFR § 258. If the permittee is interested in Treated municipal wastewater using aerated lagoon, two cells in series, with chlorination, via sodium hypochlorite, prior to discharge to Outfall 001. (Permit also authorizes

increase in design flow from 0.17 to 0.33 MGD and replacement of lagoon treatment with Sequencing Batch Reactor treatment.) Treated municipal wastewater using aerated lagoon, two cells in series, with chlorination, via sodium hypochlorite, prior to discharge to Outfall 001. (Permit also authorizes increase in design flow from 0.17 to 0.33 MGD and replacement of lagoon treatment with Sequencing Batch Reactor treatment.) alternative disposal practices such as land application or surface disposal, the Division of Water Resources shall be notified prior to the change. A copy of any results of pollutant analyses required by the Tennessee Division of Solid Waste Management (DSWM) and/or 40 CFR § 258 shall be submitted to the Division of Water Resources.

3.4. PLACEMENT OF SIGNS

The permittee shall place and maintain a sign at each outfall and any sanitary sewer overflow/release point in the collection system or the nearest publicly accessible location. For the purposes of this requirement, any point that has had a total of 5 or more overflows plus releases in the previous 12 months must be so posted. Signs at locations that are posted at the permit effective date must be maintained. Signs for locations identified during the permit term must be placed within 60 days of the event triggering the requirement.

The sign(s) should be clearly visible to the public from the bank and the receiving stream. The *minimum* sign size should be two feet by two feet (2' x 2') with one-inch (1") letters. The sign should be made of durable material and have a white background with black letters.

The sign(s) are to provide notice to the public as to the nature of the discharge and, in the case of the permitted outfalls, that the discharge is regulated by the Tennessee Department of Environment and Conservation, Division of Water Resources. The following are given as examples of the minimal amount of information that must be included on the signs:

NPDES Permitted Municipal/Sanitary Outfall:

TREATED MUNICIPAL/SANITARY WASTEWATER
Town of Chapel Hill
Chapel Hill STP
(615) 883-3243
NPDES Permit NO. TN0064670
TENNESSEE DIVISION OF WATER RESOURCES
1-888-891-8332 ENVIRONMENTAL FIELD OFFICE - Columbia

Unpermitted release/sanitary sewer overflow point:

UNTREATED WASTEWATER DISCHARGE POINT
Town of Chapel Hill
Chapel Hill STP
(615) 883-3243
NPDES Permit No. TN0064670
TENNESSEE DIVISION OF WATER RESOURCES
1-888-891-8332 ENVIRONMENTAL FIELD OFFICE - Columbia

The permittee may request the removal of signs for unpermitted release/sanitary sewer overflows points only. This request should be sent to Division EFO staff detailing the work that has been completed to rectify the cause(s) contributing to sanitary sewer overflows and releases at that location. In no case will approval to remove the signs be granted if either a sanitary sewer overflow or release has occurred at that location in the previous 12 months.

PART 4

4. DEFINITIONS AND ACRONYMS

All terminology not specifically defined herein shall be defined in accordance with the Water Quality Control Act of 1977, T.C.A. Title 69, Chapter 3, Part 1 and Tennessee Rule 0400-40-05. The following terms have the meanings given below unless otherwise specified.

4.1. DEFINITIONS

For the purposes of this permit, ***annually*** is defined as a monitoring frequency of once every 12 months beginning with the effective date of this permit, so long as the following set of measurements for a given 12 month period are made approximately 12 months subsequent to that time.

Biosolids are treated sewage sludge that have contaminant concentrations less than or equal to the contaminant concentrations listed in Table 1 of subparagraph (3)(b) of Rule 0400-40-15-.02, meet any one of the ten vector attraction reduction options listed in part (4)(b)1, 2, 3, 4, 5, 6, 7, 8, 9, or 10 of Rule 0400-40-15-.04, and meet either one of the six pathogen reduction alternatives for Class A listed in part (3)(a)3, 4, 5, 6, 7, or 8, or one of the three pathogen reduction alternatives for Class B listed in part (3)(b)2, 3, or 4 of Rule 0400- 40-15-.04.

Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

A ***calendar day*** means the 24-hour period from midnight to midnight or any other 24-hour period that reasonably approximates the midnight to midnight time period.

Combined sewer overflow or "CSO" means a discharge from a combined sewer system (CSS) at a point prior to the publicly owned treatment works (POTW) treatment plant headworks.

Combined sewer system or "CSS" means a wastewater collection system owned by a State or municipality which was originally designed to convey sanitary wastewaters (domestic, commercial, and industrial wastewaters) and stormwater through a single-pipe system into a publicly owned treatment works (POTW) treatment plant headworks.

A ***composite sample*** means a combination of not less than eight influent or effluent portions (aliquots), collected over a 24-hour period. Under certain circumstances a lesser time period may be allowed, but in no case less than eight hours. A sufficient volume of sample to perform all required analyses plus any additional amount for quality control must be obtained. For automatic samplers that use a peristaltic pump, a minimum 100 ml aliquot must be obtained.

The ***daily maximum amount*** means the total amount of any pollutant in the discharge by weight during any calendar day.

The ***daily maximum concentration*** is a limitation on the average concentration in units of mass per volume (*e.g.* milligrams per liter) of the discharge during any calendar day. When a proportional-to-flow composite sampling device is used, the daily maximum concentration is the concentration of that 24-hour composite; when other sampling means are used, the daily maximum concentration is the arithmetic mean of the concentrations of equal volume samples collected during any calendar day or sampling period.

Degradation means the alteration of the properties of waters by the addition of pollutants, withdrawal of water, or removal of habitat, except those alterations of a short duration.

De Minimis is degradation of a small magnitude, as provided in this paragraph:

(a) Discharges and withdrawals:

1. Subject to the limitation in part 3 of this subparagraph, a single discharge other than those from new domestic wastewater sources will be considered de minimis if it uses less than five percent of the available assimilative capacity for the substance being discharged.

   (Note: Consistent with T.C.A. § 69-3-108, special consideration will be given to bioaccumulative substances to confirm the effect is de minimis, even if they are less than five percent of the available assimilative capacity.)

2. Subject to the limitation in part 3 of this subparagraph, a single water withdrawal will be considered de minimis if it removes less than five percent of the 7Q10 flow of the stream.
3. If more than one activity described in part 1 or 2 of this subparagraph has been authorized in a segment and the total of the authorized and proposed impacts uses no more than 10% of the assimilative capacity, or 7Q10 low flow, they are presumed to be de minimis. Where the total of

the authorized and proposed impacts uses 10% of the assimilative capacity, or 7Q10 low flow, additional degradation may only be treated as de minimis if the Division finds on a scientific basis that the additional degradation has an insignificant effect on the resource.

(b) Habitat alterations authorized by an Aquatic Resource Alteration Permit (ARAP) are de minimis if the Division finds that the impacts, individually and cumulatively, are offset by impact minimization and/or in-system mitigation, provided however, in Outstanding National Resource Waters (ONRWs) the mitigation must occur within the ONRW.

Discharge or ***discharge of a pollutant*** refers to the addition of pollutants to waters from a source.

A ***dry weather overflow*** means a sanitary sewer overflow that is not directly related to a rainfall event.

An ***ecoregion*** is a relatively homogeneous area defined by similarity of climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables.

The ***geometric mean*** of any set of values means the n^{th} root of the product of the individual values where n is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For the purposes of calculating the geometric mean, values of zero shall be considered to be one.

A ***grab sample*** means a single sample collected at a particular time.

IC_{25} means the inhibition concentration in which at least a 25% reduction in reproduction and/or growth in test organisms occurs.

Industrial discharger means those industries identified in the standard industrial classification manual, Bureau of the Budget, 1987, as amended and supplemented, under the category "Division D - Manufacturing" and such other classes of significant waste producers as the Board or Commissioner deems appropriate.

Industrial wastes means any liquid, solid, or gaseous substance, or combination thereof, or form of energy including heat, resulting from any process of industry, manufacture, trade, or business or from the development of any natural resource.

The ***instantaneous maximum concentration*** means the concentration, in units of mass per volume, of any pollutant parameter in a grab sample taken at any point in time.

The ***instantaneous minimum concentration*** means the minimum concentration, in units of mass per volume, of a pollutant parameter in a grab sample taken at any point in time.

LC_{50} means the concentration that causes at least 50% lethality of the test organisms.

Major facility means a municipal or domestic wastewater treatment plant with a design capacity of one million gallons per day or greater; or any other facility or activity classified as such by the Commissioner.

Minor facility means any facility that is not a major facility.

The ***monthly average amount*** means the arithmetic mean of all the measured daily discharges by weight during the calendar month when the measurements were made.

The ***monthly average concentration***, means the arithmetic mean of all samples collected in a one calendar-month period, expressed in units of mass per volume of any pollutant other than bacteria.

National Pollutant Discharge Elimination System or ***NPDES*** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the federal CWA. The term includes an "approved program."

New or increased discharge is a new discharge of pollutants to waters of the state or an increase in the authorized loading of a pollutant above either (1) numeric effluent limitations established in a National Pollutant Discharge Elimination System permit for that discharge, or (2) if no such limitations exist, the actual discharges of that pollutant.

New source means any building, structure, facility, area, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced after the publication of state or federal regulations prescribing a standard of performance.

Nitrate (as N) means nitrate reported as nitrogen.

A ***one-week period*** (or ***calendar-week***) means the period from Sunday through Saturday. For weekly average reporting purposes, a calendar week that contains a change of month shall be considered part of the latter month.

Owner or ***operator*** means any person who owns, leases, operates, controls, or supervises a source.

Person means an individual, association, partnership, corporation, municipality, state or federal agency, or an agent or employee thereof.

Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

Pollutant means sewage, industrial wastes, or other wastes.

Pollution means such alteration of the physical, chemical, biological, bacteriological, or radiological properties of the waters of this state including, but not limited to, changes in temperature, taste, color, turbidity, or odor of the waters that will:

(a) Result or will likely result in harm, potential harm, or detriment to the public health, safety, or welfare;

(b) Result or will likely result in harm, potential harm, or detriment to the health of animals, birds, fish, or aquatic life;

(c) Render or will likely render the waters substantially less useful for domestic, municipal, industrial, agricultural, recreational, or other reasonable uses; or

(d) Leave or likely leave the waters in such condition as to violate any standards of water quality established by the Board.

Quarter means any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

Rainfall event means any occurrence of rain, preceded by 10 hours without precipitation that results in an accumulation of 0.01 inches or more. Instances of rainfall occurring within 10 hours of each other will be considered a single rainfall event.

Rationale or ***fact sheet*** means a document that is prepared when drafting an NPDES permit or permit action. It provides the technical, regulatory and administrative basis for an agency's permit decision.

A ***reference site*** means the least impacted waters within an ecoregion that have been monitored to establish a baseline to which alterations of other waters can be compared.

A ***reference condition*** is a parameter-specific set of data from regional reference sites that establish the statistical range of values for that particular substance at least-impacted streams.

Release means the flow of sewage from any portion of the collection or transmission system owned or operated by a publicly owned treatment works (POTW) or a domestic wastewater treatment plant, other than through permitted outfalls, that does not reach waters. In addition, a "release" includes a backup into a building or private property that is caused by blockages, flow conditions, or other malfunctions originating in the collection or transmission system owned or operated by the permittee. A "release" does not include:

(a) Backups into a building or private property caused by blockages or other malfunctions originating in a private lateral;

(b) Events caused by vandalism;

(c) Events caused by lightning strike;

(d) Events caused by damage due to third parties working on other utilities in the right of way, e.g., cross bore from telecommunications line; or

(e) Events that are directly incidental to planned, preventative, or predictive maintenance provided the site is under the direct control of a certified operator or contractor, public access is restricted, and the site is disinfected.

Sanitary sewer overflow or SSO means an unpermitted discharge of wastewater from the collection or treatment system of a publicly owned treatment works

(POTW) or a domestic wastewater treatment plant other than through a permitted outfall.

Schedule of compliance means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, condition of a permit, other limitation, prohibition, standard, or regulation. This term includes, but is not limited to, schedules authorized by national effluent limitations guidelines or by Tennessee's water quality standards.

The term ***semi-annually,*** for the purposes of this permit, means the same as once every 6 months. Measurements of the limited effluent parameters may be made any time during a 6 month period beginning from the effective date of this permit, so long as the second set of measurements for a given 12 month period are made approximately 6 months subsequent to that time, if feasible.

Severe property damage, when used to consider the allowance of a bypass, means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Sewage means water-carried waste or discharges from human beings or animals, from residences, public or private buildings, or industrial establishments, or boats, together with such other wastes and ground, surface, storm, or other water as may be present

Sewerage system means the conduits, sewers, and all devices and appurtenances by means of which sewage and other waste is collected, pumped, treated, or disposed.

Sludge or ***sewage sludge*** is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

Source means any activity, operation, construction, building, structure, facility, or installation from which there is or may be the discharge of pollutants.

Standard of performance means a standard for the control of the discharge of pollutants that reflects the greatest degree of effluent reduction that the Commissioner determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

Stream means a surface water that is not a wet weather conveyance.

Subecoregion is a smaller, more homogenous area that has been delineated within an ecoregion.

Total dissolved solids or ***TDS*** means nonfilterable residue.

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

The term ***washout*** is applicable to domestic wastewater activated sludge plants and means a loss of mixed liquor suspended solids (MLSS) of 30.00% or more from the aeration basin(s).

Waters means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof, except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

Watercourse means a man-made or natural hydrologic feature with a defined linear channel that discretely conveys flowing water, as opposed to sheet-flow.

Weekly average amount means the arithmetic mean of all the measured daily discharges by weight during the calendar week when the measurements were made.

Weekly average concentration means the arithmetic mean of all the concentrations expressed in units of mass per volume of any pollutant measured in a calendar week.

Wet weather conveyance means, notwithstanding any other law or rule to the contrary, man-made or natural watercourses, including natural watercourses that have been modified by channelization:

(a) That flow only in direct response to precipitation runoff in their immediate locality;

(b) Whose channels are at all times above the groundwater table;

(c) That are not suitable for drinking water supplies; and

(d) In which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months.

Wet weather overflow means a sanitary sewer overflow that is directly related to a specific rainfall event.

Wet weather release means a release that is directly related to a specific rainfall event.

4.2. ACRONYMS AND ABBREVIATIONS

1Q10 – 1-day minimum, 10-year recurrence interval
30Q5 – 30-day minimum, 5-year recurrence interval
7Q10 – 7-day minimum, 10-year recurrence interval
BAT – best available technology economically achievable
BCT – best conventional pollutant control technology
BDL – below detection limit
BOD_5 – five-day biochemical oxygen demand
BPT – best practicable control technology currently available
$CBOD_5$ – five-day carbonaceous biochemical oxygen demand
CEI – compliance evaluation inspection
CFR – code of federal regulations
CFS – cubic feet per second
CFU – colony forming units
CIU – categorical industrial user
CSO – combined sewer overflow
DMR – discharge monitoring report

D.O. – dissolved oxygen
E. coli – *Escherichia coli*
EPA – Environmental Protection Agency
EFO – environmental field office
GPM – gallons per minute
IC_{25} – inhibition concentration causing 25% reduction in survival, reproduction, and growth of the test organisms
IU – industrial user
IWS – industrial waste survey
LB (lb) – pound
LC_{50} – acute test causing 50% lethality
MDL – method detection limit
MGD – million gallons per day
mg/L – milligrams per liter
ML – minimum level of quantification
mL – milliliter
MLSS – mixed liquor suspended solids
MOR – monthly operating report
NODI – no discharge code in NetDMR
NPDES – national pollutant discharge elimination system
PL – permit limit
POTW – publicly owned treatment works
SAR – semi-annual report [pretreatment program]
SIU – significant industrial user
SSO – sanitary sewer overflow
STP – sewage treatment plant
TBEL – technology-based effluent limit
TCA – Tennessee code annotated
TDEC – Tennessee Department of Environment and Conservation
TIE/TRE – toxicity identification evaluation/toxicity reduction evaluation
TMDL – total maximum daily load
TRC – total residual chlorine
TSS – total suspended solids
WQBEL – water quality-based effluent limit

4.3. RESOURCES, HYPERLINKS, AND WEB PAGES

Clean Water Act NPDES Electronic Reporting (eReporting) Information
https://www.epa.gov/compliance/npdes-ereporting

Electronic Code of Federal Regulations (eCFR), Title 40 (40 CFR § 1 through § 1099)
https://www.ecfr.gov/cgi-bin/text-idx?SID=75202eb5d09974cab585afeea981220b&mc=true&tpl=/ecfrbrowse/Title40/40chaptI.tpl

Electronic Reporting (NetDMR) Waiver Request
https://www.tn.gov/content/dam/tn/environment/water/documents/wr_ereporting_waiver.pdf

Low Flow Statistics Tools: A How-To Handbook for NPDES Permit Writers (EPA)
https://www.epa.gov/sites/production/files/2018-11/documents/low_flow_stats_tools_handbook.pdf

Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (EPA)
https://www.epa.gov/sites/production/files/2015-08/documents/acute-freshwater-and-marine-wet-manual_2002.pdf

NetDMR Login
https://cdxnodengn.epa.gov/net-netdmr/

NetDMR, MyTDEC Forms, & Electronic Reporting Information
https://www.tn.gov/environment/program-areas/wr-water-resources/netdmr-and-electronic-reporting.html

NPDES Compliance Inspection Manual (EPA)
https://www.epa.gov/sites/production/files/2017-01/documents/npdesinspect.pdf

NPDES Electronic Reporting Rule
https://www.federalregister.gov/documents/2015/10/22/2015-24954/national-pollutant-discharge-elimination-system-npdes-electronic-reporting-rule

Quality System Standard Operating Procedure for Macroinvertebrate Stream Surveys (QSSOP)
https://www.tn.gov/content/dam/tn/environment/water/documents/DWR-PAS-P-01-Quality_System_SOP_for_Macroinvertebrate_Stream_Surveys-081117.pdf

Rules of the TN Department of Environment and Conservation, Chapter 0400-40
https://publications.tnsosfiles.com/rules/0400/0400-40/0400-40.htm

Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA)
https://www.epa.gov/sites/production/files/2015-08/documents/short-term-chronic-freshwater-wet-manual_2002.pdf

TDEC Water Quality Rules, Reports, and Publications
https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/water-quality-reports---publications.html

Technical Support Document for Water Quality-based Toxics Control (EPA)
https://www3.epa.gov/npdes/pubs/owm0264.pdf

Tennessee Nutrient Reduction Framework
https://www.tn.gov/content/dam/tn/environment/water/tmdl-program/wr-ws_tennessee-draft-nutrient-reduction-framework_030315.pdf

Tennessee Plant Optimization Program (TNPOP)
https://www.tn.gov/environment/program-areas/wr-water-resources/tn-plant-optimization-programs/tnpop.html

Tennessee Water Resources Data and Map Viewers
https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/water-resources-data-map-viewers.html

USGS StreamStats
https://www.usgs.gov/mission-areas/water-resources/science/streamstats-streamflow-statistics-and-spatial-analysis-tools?qt-science_center_objects=0#qt-science_center_objects

USGS Hydrologic Toolbox
https://pubs.usgs.gov/publication/tm4D3

ADDENDUM TO RATIONALE

Town of Chapel Hill
PERMIT NO. TN0064670

March 11, 2024
Addendum prepared by: Mrs. Tricia Swaney

1) Page 2, Section 1.1.1.
   a) The Division added numeric limitation for (51040) E.Coli monthly geometric mean of less than or equal to 126 mg/L to be sampled weekly. This line should have been in the draft originally.

2) Page 5, Section 1.1.2.
   a) The Division added numeric limitation for (51040) E.Coli monthly geometric mean of less than or equal to 126 mg/L to be sampled weekly. This line should have been in the draft originally.

3) In a letter prepared by Mr. Danny Bingham, Town Administrator, dated February 20, 2024, Town of Chapel Hill submitted the following comments:

   a) *The daily maximum BOD, 5-day, 20 C concentration limit (00310) for the 0.33 MGD SBR Facility was lowered to 23.3 mg/L. The permit issued August 2, 2022, had this limit as 40 mg/L. We request that this concentration limit remain at 40 mg/L.*

   Unfortunately, the previous permit's daily maximum BOD_5 concentration limit of 40 mg/L for the 0.33 MGD SBR system was a miscalculation and is corrected in this permit. The BOD_5 concentration limits for the larger 0.33 MGD facility were calculated to maintain the City's discharge at its current loading values of 43 lb/day (monthly average), 57 lb/day (weekly average), and 64 lb/day (daily maximum). See below for the calculations.

   Monthly average: $\frac{43\frac{lb}{day}}{(8.34*0.33\ MGD)} = 15.6\frac{mg}{L}$

   Weekly average: $\frac{57\frac{lb}{day}}{(8.34*0.33\ MGD)} = 20\frac{mg}{L}$

Daily maximum: $\frac{64\frac{lb}{day}}{(8.34*0.33\ MGD)} = 23.3\frac{mg}{L}$

Therefore, the Division cannot grant the City's request and the updated BOD_5 daily maximum concentration for the 0.33 MGD plant will remain 23.3 mg/L in the final permit.

b) *The daily maximum BOD, 5-day, 20 C mass limit (00310) for the 0.33 MGD SBR Facility was established. We request this parameter be removed entirely.*

The Division agrees with this request. It was a mistake that the daily maximum loading limit was added to the draft permit for the 0.33 MGD SBR facility.

Lagoon systems often have daily maximum loading BOD limits in lieu of a 40% BOD daily percent removal requirement, which is difficult in lagoon systems where influent flow does not necessarily result in proportional effluent flow. Therefore, when the 0.33 MGD SBR facility is operational, it will have a 40% BOD daily percent removal requirement, and the daily maximum loading limit is not required.

TLSw

RATIONALE

Town of Chapel Hill
Chapel Hill STP
NPDES Permit No. TN0064670
Permit Writer: Tricia Swaney

1. PERMIT STATUS & PUBLIC PARTICIPATION

Permit Type:	Municipal
Classification:	Minor
Previous Issuance Date:	02-AUG-22
Previous Expiration Date:	31-MAR-24
Previous Effective Date:	01-SEP-22

As provided under Rule 0400-40-05-.06, this permit allows 30 days for public comment on the proposed permit. The 30-day public comment period begins the date this permit is placed on public notice. The public notice document for this permit can be found at the Division's Water Notices and Hearings website under "Permit Public Notices".

Public Notice Date:	February 6, 2024
Comment Period Ends:	March 8, 2024

Those wishing to make a formal comment on the proposed permit may submit comments electronically to Water.Permits@tn.gov, or by mail to:

Division of Water Resources - Water Based Systems Unit
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243-1102

The public may also request a public hearing on a proposed permit by submitting such a request in writing during the public comment period specified above. The request should indicate the interest of the party filing it and the reasons why a hearing is warranted. A request for public hearing should be submitted as soon as practicable to the addresses provided above. Questions regarding the draft permit may be directed to 1-888-891-TDEC.

2. FACILITY INFORMATION

2.1.1. Current System – Aerated Lagoon at 0.17 MGD

Permittee Name:	**Town of Chapel Hill**
Project Name:	**Chapel Hill STP**
Location:	Highway 99 (near Henry Horton State Park), Chapel Hill, Marshall County, Tennessee
Contact:	Donny Groves, Utilities Superintendent 931-364-7631 donnygroves@townofchapelhilltn.com
Design Flow Rate:	0.17 MGD
Percentage Industrial Flow:	0 %
Certified Operator Grades:	STP: II; CS: 1
Treatment Description:	Aerated lagoon, two cells in series with chlorination via sodium hypochlorite prior to discharge

2.1.2 New System – Sequencing batch reactor at 0.33 MGD

Permittee Name:	**Town of Chapel Hill**
Project Name:	**Chapel Hill STP**
Location:	Highway 99 (near Henry Horton State Park), Chapel Hill, Marshall County, Tennessee
Contact:	Donny Groves, Utilities Superintendent 931-364-7631 donnygroves@townofchapelhilltn.com
Design Flow Rate:	0.33 MGD
Percentage Industrial Flow:	0 %
Certified Operator Grades:	STP: II; CS: 1; Date Rated: 7/12/2022
Treatment Description:	0.33 MGD Sequencing Batch Reactor (SBR)

FACILITY DISCHARGES AND RECEIVING WATERS

OUTFALL 001	
LONGITUDE	LATITUDE
-86-42-21	35-35-42

FLOW (MGD)	DISCHARGE SOURCE
0.3300	Municipal wastewater
0.3300	TOTAL DISCHARGE

RECEIVING STREAM DISCHARGE ROUTE			
Duck River at mile 185.5			
STREAM LOW FLOW (CFS) *	7Q10	1Q10	30Q5
		139.44	174.94
(MGD)		90.12	113.06

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH & AQUATIC LIFE	RECREATION	IRRIGATION	LIVESTOCK & WILDLIFE	DOMESTIC WATER SUPPLY
X	X	X	X	X
INDUSTRIAL	NAVIGATION			
X				

Treatment: Sequencing Batch Reactor prior to discharge at Outfall 001

* Reference: USGS Hydrologic Toolbox using Station 03599240

2.2. FACILITY HISTORY AND TIMELINE

Date	Permit Location and Activity
November 4, 1987	Permanent Sewer Utility Easement inside Henry Horton State Park by Governor Ned McWherter to City of Chapel Hill
1998	Chapel Hill Waste Water Treatment Plant constructed
June 30, 2006	NPDES Permit issued to Chapel Hill WWTP • Effective: August 1, 2006 • Expiration: April 30, 2008
April 30, 2008	NPDES Permit issued to Chapel Hill WWTP • Effective: June 1, 2008

Date	Permit Location and Activity
	• Expiration: April 29, 2013
August 13, 2012	NPDES Permit application received. • Outfall 001 discharges treated municipal wastewater from 3 celled wastewater lagoon before discharging to Duck River at mile 185.5. • Disinfection: Sodium hypochlorite • Design Flow Rate: 0.17 MGD • Maximum Daily Flow: 0.29 MGD • Annual Average Daily Flow: 0.07 MGD • Average Daily Flow Rate Outfall 001: 0.08 MGD
May 1, 2013	NPDES Permit issued to Chapel Hill WWTP • Effective: June 1, 2013 • Expiration: May 30, 2018
July 18, 2017	NetDMR Reporting
November 29, 2018	NPDES Permit application received. • Outfall 001 discharges treated municipal wastewater from 3 celled wastewater lagoon before discharging to Duck River at mile 185.5. • Disinfection: Sodium hypochlorite • Design Flow Rate: 0.17 MGD • Maximum Daily Flow: 0.731 MGD • Annual Average Daily Flow: 0.16 MGD • Average Daily Flow Rate Outfall 001: 0.2683 MGD
April 1, 2019	NPDES Permit issued to Chapel Hill WWTP • Effective: May 1, 2019 • Expiration: March 31, 2024
December 16, 2019	Preliminary proposed expansion alternatives
October 29, 2021	NPDES Permit application modification received for Sequencing Batch Reactor. • Design flow rate: 0.33 MGD • Maximum Daily Flow: 0.731 MGD • Average Annual Flow: 0.16 MGD • Average Daily Flow Rate Outfall 001: 0.1407 MGD • Outfall 001 affected • Begin construction: July 22, 2022 • End construction: September 30, 2022 • Begin discharge: September 30, 2022 • Attainment of operational level: January 1, 2024
July 12, 2022	Certified Operator Rating Sheet submitted for new SBR POTW design.

Date	Permit Location and Activity
	• Wastewater plant grade: 2 • Collection system grade: 1
August 2, 2022	NPDES Permit Modification issued to Chapel Hill WWTP, identifying new effluent limits for SBR system • Effective: September 1, 2022 • Expiration: March 31, 2024
September 21, 2023	NPDES Permit application received. • Current system design flow rate: 0.17 MGD • SBR system design flow rate: 0.33 MGD • Maximum Daily Flow: 0.82 MGD • Average Annual Flow: 0.143 MGD • Average Daily Flow Rate Outfall 001: 0.143 MGD • Outfall 001 affected • Begin construction: September 1, 2024 • End construction: November 30, 2025 • Begin discharge: December 1, 2025

3. RECEIVING STREAM INFORMATION

Receiving Waterbody: **Duck River at mile 185.5**
Watershed Group: Duck-Upper
Hydrocode: 06040002
Low Flow: 1Q10 = 90.12 MGD (139.44 CFS)
Low Flow Reference: USGS StreamStats/Hydrologic Toolbox, Gage Station 03599240

Stream Designated Uses:

Domestic Water Supply	*Industrial*	*Fish & Aquatic Life*	*Recreation*
X	**X**	**X**	**X**
Livestock & Wildlife	*Irrigation*	*Navigation*	*Trout*
X	**X**		

Low flows on unregulated streams are estimated using guidance from the EPA document Low Flow Statistics Tools: A How-To Handbook for NPDES Permit Writers. When sufficient and representative USGS gage data is available, USGS Hydrologic Toolbox is used to analyze the flow data and calculate 1Q10 and 30Q5 values. Using these low flow values at the gage, the permit writer then determines the flow at the point of discharge using the following equation:

$$Q_{outfall} = Q_{gage} \times \frac{A_{outfall}}{A_{gage}}$$

Where:

$Q_{outfall}$ = Low flow statistic at outfall location
Q_{gage} = Low flow statistic at gage location
$A_{outfall}$ = Area draining to outfall
A_{gage} = Area draining to gage

In the absence of sufficient gage data, the Division relies on USGS Streamstats to calculate low flows statistics.

In this permit, USGS Gage Station 03599240 provides sufficient data to characterize the low flow of the receiving stream. Gage data was analyzed with Hydrologic Toolbox and used to calculate the 1Q10 above. Appendix 5 details the Streamstats and Hydrologic Toolbox outputs used for this calculation.

4. NEW PERMIT LIMITATIONS AND COMPLIANCE SCHEDULE SUMMARY

a) The units for *E. coli* have been standardized to number per 100 mL (#/100 mL). Previously, the Division used either MPN/100 mL or CFU/100 mL. The identification of one of these two units indirectly created a requirement for a specific type of testing methodology. By utilizing #/100 mL unit, permittees are provided the flexibility to select the 40 CFR § 136 method that is most suitable for their operations. The limit value (number) will remain the same as the limit units are functionally equivalent.

   The Division proposes to remove the monthly geometric mean and lower the daily maximum limit for *E. coli* from 487 #/100 ml to 410 #/100 ml. See Section 6.8 for more information.

   Language throughout the permit has been updated to reflect the eReporting phase 2 requirements in 40 CFR § 127. This includes (but is not limited to) detailing specific data elements that are required to be reported for sanitary sewer overflows, releases and bypasses as well as pretreatment program information.

   New permit limitations for BOD_5, TSS, and percent removal for both BOD_5 and TSS will be implemented with the new SBR system once construction is complete and discharge from the SBR system commences.

b) Compliance Schedule Summary

Description of Report to be Submitted	Reference Section in Permit
Monthly Discharge Monitoring Reports	1.3.1.
Monthly Operational Reports	1.3.4.
Bypass and Sanitary sewer overflow and Release Report	1.3.5.1.
Industrial Waste Survey Report within 120 days of the effective permit date	3.2.

c) For comparison, this rationale contains a table depicting the previous permit limits and effluent monitoring requirements in Appendix 1.

5. PREVIOUS PERMIT TERM REVIEW

A review of the permittee's Discharge Monitoring Reports (DMRs) from May 2019 to December 2023 revealed that the permittee reported violations of permit limits for BOD_5, BOD_5 % Removal, TRC, TSS, Settleable Solids, and *E. coli*. A summary of data reported on DMRs during the previous permit term is in Appendix 2.

Parameter	# of Violations (# of months with a violation)
BOD_5	38
BOD_5 % Removal	27
TRC	1
E.*coli*	3
Settleable Solids	1
TSS	1

During the previous permit term, Division personnel from the Columbia Environmental Field Office performed a Compliance Evaluation Inspection (CEI) of the permittee's facility. The CEI was performed by Gary Horne on March 22, 201, and the permittee was found to be in compliance. The inspection report described the following:

- The plant has reported BOD and BOD percent removal exceedances. Town of Chapel Hill has contracted with consulting firm to provide technical assistance and assessment of the loading to the lagoon system.
- A new Hach DR-900 dual meter was purchased. Lab equipment calibration performed on 10/21/20. The composite sample was calibrated as well.

- A new force main sewer line was installed and placed into service from the Chapel Hill Elementary School to the wastewater treatment plant. This improvement will reduce the volume of wastewater being received at the Morningside Drive pumping station. Also, a new influent line was installed at the wastewater treatment plant.
- Town of Chapel Hill has contracted with consulting firm to design a new SBR technology wastewater treatment plant. This technology will eliminate the use of the current Septic Tank Effluent Pump (STEP) system for future customers.

MOR Data Analysis (Last 5 Years)

% I/I	39
% Capacity	19
Peaking Factor	10
Inf 7d Low Flow 5yr	.084
Eff 7d Low Flow 5yr	.042
Inf Avg Flow 5yr	.138
Eff Avg Flow 5yr	.101
Inf 7d Low TSS 5yr	
Inf Avg TSS 5yr	
Eff Avg CBOD 5yr	
Inf Avg CBOD 5yr	
Inf Avg BOD 5yr	144
Eff Avg BOD 5yr	50
Inf Avg NH3 5yr	
Eff Avg NH3 Mg L 5yr	
Inf Peak Flow 5yr	.818
Pretreatment MGD	

6. PROPOSED EFFLUENT LIMITS AND RATIONALE

6.1.1. Current System – Aerated Lagoon at 0.17 MGD

PARAMETERS	MONTHLY AVERAGE CONCENTRATION (MG/L)	MONTHLY AVERAGE AMOUNT (LB/DAY)	WEEKLY AVERAGE CONCENTRATION (MG/L)	WEEKLY AVERAGE AMOUNT (LB/DAY)	DAILY MAXIMUM CONCENTRATION (MG/L)	DAILY MAXIMUM CONCENTRATION (LB/DAY))	MINIMUM PERCENT REMOVAL	RATIONALE
BOD_5	30	43	40	57	45	64	65% (monthly average)	Anti-backsliding, refer to 6.2.1
Total Suspended Solids	100	142	110	156	120	170	—	Rule 0400-40-05-.09, refer to 6.2.2 below
Dissolved Oxygen	1.0 (daily min) instantaneous	—	—	—	—	—	—	D.O. protection, Refer to 6.2.1 below
Total Chlorine Residual	—	—	—	—	2.0	—	—	Refer to 6.6.1 below
Total Nitrogen	—	—	—	—	Report (qtr avg)	Report (qtr avg)	—	Refer to 6.7 below
Total Phosphorus	—	—	—	—	Report (qtr avg)	Report (qtr avg)	—	Refer to 6.7 below
E. coli (#/100mL)		—	—	—	410 (#/100 mL)	—	—	Rule 0400-40-03-.03, Refer to 6.8 below
Settleable Solids (mL/L)	—	—	—	—	1.0 (mL/L)	—	—	Rule 0400-40-05-.09
pH (standard units)	6.0 – 9.0	—	—	—	—	—	—	Rule 0400-40-03-.03
Flow (MGD):								
Influent	Report	—	—	—	Report	—	—	Used to quantify pollutant load
Effluent	Report	—	—	—	Report	—	—	Used to quantify pollutant load

	Monthly Total		Refer to 7 below	
Dry Weather	Sanitary sewer overflows	0	Refer to 7 below	
Wet Weather	Sanitary sewer overflows	0	Refer to 7 below	

Note: Weekly limitations on BOD_5 and TSS concentrations are given as required per 40 CFR 133.105(a)(2) or 133.105(e)(1)(ii) & 133.105(b)(2) respectively; daily BOD_5 and TSS limitations are authorized by T.C.A. 0400-40-05-.09; monthly, weekly, and daily mass loads are limited per 40 CFR 122.45(f) and based on the design flow as per 40 CFR 122.45(b); monthly average percent removal rates for BOD_5 are required per 40 CFR 133.105(a)(3) and 133.105(e)(1)(iii). Monthly average percent removals for TSS are established per 40 CFR 133.105 (b)(3) and 133.103(c).

6.1.2. New System – Sequenced batch reactor at 0.33 MGD

PARAMETERS	MONTHLY AVERAGE CONCENTRATION (MG/L)	MONTHLY AVERAGE AMOUNT (LB/DAY)	WEEKLY AVERAGE CONCENTRATION (MG/L)	WEEKLY AVERAGE AMOUNT (LB/DAY)	DAILY MAXIMUM CONCENTRATION (MG/L)	DAILY MAXIMUM CONCENTRATION (LB/DAY))	MINIMUM PERCENT REMOVAL	RATIONALE
BOD_5	15.6	43	20	57	23.3	64	40% (daily) 85% (monthly average)	Antidegradation, Refer to 6.2.1 below and Rule 0400-40-05-.09 (for BOD_5)
Total Suspended Solids	30	83	40	110	45	124	40% (daily) 85% (monthly average)	Rule 0400-40-05-.09, refer to 6.2.2 below
Dissolved Oxygen	1.0 (daily min) instantaneous	—	—	—	—	—	—	D.O. protection, Refer to 6.2 below
Total Chlorine Residual	—	—	—	—	2.0	—	—	Refer to 6.6.2 below
Total Nitrogen	—	—	—	—	Report (qtr avg)	Report (qtr avg)	—	Refer to 6.7 below
Total Phosphorus	—	—	—	—	Report (qtr avg)	Report (qtr avg)	—	Refer to 6.7 below
E. coli (#/100mL)	126 (#/100 mL)	—	—	—	410 (#/100 mL)	—	—	Rule 0400-40-03-.03, Refer to 6.8 below
Settleable Solids (mL/L)	—	—	—	—	1.0 (mL/L)	—	—	Rule 0400-40-05-.09
pH (standard units)	6.0 – 9.0	—	—	—	—	—	—	Rule 0400-40-03-.03
Flow (MGD):								
Influent	Report	—	—	—	Report	—	—	Used to quantify pollutant load
Effluent	Report	—	—	—	Report	—	—	Used to quantify pollutant load

	Monthly Total		Refer to 7 below	
Dry Weather	Sanitary sewer overflows	0	Refer to 7 below	
Wet Weather	Sanitary sewer overflows	0	Refer to 7 below	

Note: Weekly limitations on BOD_5 and TSS concentrations are given as required per 40 CFR 133.102(a)(2) or 133.102(a)(4)(2) & 133.102 (b)(2) respectively; daily BOD_5 and TSS limitations are authorized by T.C.A. 0400-40-05-.09; monthly and weekly mass loads are limited per 40 CFR 122.45(f) and based on the design flow as per 40 CFR 122.45(b); monthly average percent removal rates for BOD_5 and TSS are required per 40 CFR 133.102(a)(3) or 133.102(a)(4)(iii) and 133.102 (b)(3) respectively. A minimum 40% daily removal rate is required as equivalent to a daily mass load limitation.

6.2. CONVENTIONAL PARAMETERS

6.2.1. BOD_5 and Dissolved Oxygen

Biochemical oxygen demand, or BOD, is a measure of the oxygen used when biological processes break down organic pollutants in wastewater. The amount of oxygen used is more specifically referred to as the five-day biochemical oxygen demand, or BOD_5. This parameter is used in the wastewater industry to measure both the strength of wastewater and the performance of wastewater treatment processes.

Limits on the oxygen demand remaining in the treated wastewater is often necessary to prevent pollutants in the wastewater from driving oxygen in the receiving stream down below the levels necessary to support fish and aquatic life. Additionally, the breakdown of ammonia into other forms of nitrogen also requires oxygen and therefore exerts an oxygen demand on receiving wastewaters.

For the current lagoon 0.17 MGD facility, the monthly average BOD_5 limit of 30 mg/L (and the corresponding loading limit of 43 lb/day) is retained from the previous permit.

For the future SBR 0.33 MGD facility, the monthly average BOD_5 limit of 15.6 mg/L is calculated to maintain the current loading limit of 43 lb/day, in accordance with antidegradation provisions. The weekly average and daily maximum limits were similarly calculated to maintain current loading limits.

The minimum dissolved oxygen effluent limitation of 1.0 mg/L is a practical limit achievable by the facility rather than a water-quality based limit necessary to protect fish and aquatic life. A minimum oxygen level of 1.0 mg/L is necessary in a treatment system to prevent nuisance conditions associated with anaerobic environments.

6.2.2. Total Suspended Solids (TSS)

Total Suspended Solids is a general indicator of the quality of a wastewater and will be limited in this permit. The technology-based TSS limits for both the

current domestic waste stabilization 0.17 MGD lagoon and the new 0.33 MGD SBR treatment system are provided in Tennessee Rule 0400-40-05-.09(1)(a).

TSS - Domestic Waste Stabilization Lagoons			
Monthly Average	*Weekly Average*	*Daily Maximum*	*% Removal*
100 mg/L	110 mg/L	120 mg/L	N/A

TSS - Conventional Secondary Treatment Plants			
Monthly Average	*Weekly Average*	*Daily Maximum*	*Monthly Average*
30 mg/L	40 mg/L	45 mg/L	85% Removal

6.2.3. Percent Removal

Currently with the 0.17 MGD lagoon system, the treatment facility is required to remove 65% of the BOD_5 that enters the facility on a monthly basis. Once construction is complete and use of the new SBR 0.33 MGD system commences, the treatment facility is required to remove 85% of both BOD_5 and TSS. This is part of the minimum requirement for all municipal treatment facilities contained in Code of Federal Regulations (CFR) 40 § 133.102. The reasons stated by the EPA for these requirements are to achieve these two basic objectives:

i. To encourage municipalities to correct excessive inflow and infiltration (I/I) problems in their sanitary sewer systems; and
ii. To help prevent intentional dilution of the influent wastewater as a means of meeting permit limits.

The new SBR 0.33 MGD treatment facility will be required to remove 40 % of the BOD_5 and TSS that enter the facility on a daily basis. This percent removal will be calculated weekly.

6.2.4. Settleable Solids

The settleable solids limit of 1.0 ml/L is a technology-based limit established in Rule 0400-40-05-.09.

6.3. FLOW

Monitoring of flow quantifies the load of pollutants to the stream. Flow shall be reported in million gallons per day (MGD) and monitored at the time of sample collection.

6.4. PH

According to the State of Tennessee Water Quality Standards [Chapter 0400-40-03-.03(3) (b)], the pH for the protection of Fish and Aquatic Life shall not fluctuate more than 1.0 unit over a period of 24 hours and shall not be outside the following ranges: 6.0 – 9.0 standard units (SU) in wadeable streams and 6.5 – 9.0 SU in larger rivers, lakes, reservoirs, and wetlands. Considering that the receiving stream will provide some buffering capacity, effluent limitation for pH will be retained in a range 6.0 to 9.0. The sample type will be grab.

6.5. AMMONIA (NH_3-N)

To assess ammonia toxicity impacts, the state utilizes Tennessee Rules, Chapter 0400-40-03-.03-3(3)(j), dated September 11, 2019, to derive allowable instream protection values protective of chronic and acute exposures to a continuous discharge. A mass balance equation with the treatment facility, stream flows, and these allowable values determines the monthly average and daily maximum permit limits.

The temperature used in calculations is determined based on measured ambient instream temperature or is estimated according to Tennessee's Three Grand Divisions as follows: East (winter 15°C, summer 25°C), Middle (winter 17°C, summer 27°C), and West (winter 20°C, summer 30°C). A pH value of 7.5 was used.

Using temperature and pH values, the criterion continuous concentration (CCC) and criterion maximum concentration (CMC) values are calculated using the following equations:

$$CCC = 0.8876 * \left(\frac{0.0278}{1 + 10^{7.688-pH}} + \frac{1.1994}{1 + 10^{pH-7.688}}\right) * \left(2.126 * 10^{0.028*\left(20-MAX(T,7)\right)}\right)$$

and

$$CMC = MIN\left\{\begin{array}{c}\left(\frac{0.275}{1 + 10^{7.204-pH}} + \frac{39.0}{1 + 10^{pH-7.204}}\right), \\ \left(0.7249 * \left(\frac{0.0114}{1 + 10^{7.204-pH}} + \frac{1.6181}{1 + 10^{pH-7.204}}\right) * \left(23.12 * 10^{0.036*(20-T)}\right)\right)\end{array}\right\}$$

The determined CCC and CMC values are then used in the mass balance equation as follows:

$$CCC = \frac{Q_S C_S + Q_{STP} C_{STP}}{Q_S + Q_{STP}} \quad \text{or} \quad C_{STP} = \frac{CCC(Q_S + Q_{STP}) - (Q_S C_S)}{Q_{STP}}$$

where:

CCC	=	Criteria continuous concentration (mg/L)
Q_S	=	7Q10 flow of receiving stream (MGD)
Q_{STP}	=	Design flow of STP (MGD)
C_S	=	Assumed/Measured instream NH_3 (mg/L)
C_{STP}	=	Allowable STP discharge of NH_3 (mg/L)

See below for calculations:

CCC Calculation: Chronic Limits

	Winter		Summer
Temp (°C)=	17	Temp (°C)=	27
pH=	7.5	pH=	7.5
MAX Expression	17.0000	MAX Expression	27.0000
Winter CCC=	**1.69**	Summer CCC=	**0.89**

CCC - Continuous Chronic Criterion Allowable instream NH3 concentration [mg/l]

$$CCC = \frac{(\text{Critical Low Flow [MGD]} * \text{Background Ammonia [mg/L]}) + (\text{Design Flow [MGD]} * \textbf{Effluent Concentration [mg/L]})}{(\text{Critical Low Flow [MGD]} + \text{Design Flow [MGD]})}$$

where:		
	90.12	Critical Low Flow [MGD] (1Q10 value)
	0.121	Background Ammonia Concentration [mg/L]*
	0.27	WWTP Design Flow or long-term average flow [MGD]

Therefore, the Allowable **Effluent Concentrations** and corresponding **Amounts** in winter and summer are:

Winter		Summer	
525.67	Concentration [mg/L]	**256.682**	Concentration [mg/L]
1183.7	Amount [lb/day]	**578.0**	Amount [lb/day]

* In the absence of measured data, an assumed background concentration of 0.1 mg/L is used based on an Agreed Wasteload Allocation Modeling Methodology between the EPA and State of TN

CMC Calculation: Acute Limits

Winter		Summer	
Temp (˚C)=	17	Temp (˚C)=	27
pH=	7.5	pH=	7.5
MAX Expression	17.0000	MAX Expression	27.0000
Winter CMC=	**11.84**	Summer CMC=	**5.17**

CMC = Continuous Maximum Criterion Allowable instream NH3 concentration [mg/l]

$$CMC = \frac{(\text{Critical Low Flow [MGD]} * \text{Background Ammonia [mg/L]}) + (\text{Design Flow [MGD]} * \textbf{Effluent Concentration [mg/L]})}{(\text{Critical Low Flow [MGD]} + \text{Design Flow [MGD]})}$$

where:		
	90.12	Critical Low Flow [MGD] (1Q10 value)
	0.121	Background Ammonia Concentration [mg/L]
	0.27	WWTP Design Flow or long-term average flow [MGD]

Therefore, the Allow able **Effluent Concentrations** and corresponding **Amounts** in winter and summer are:

Winter		Summer	
3924.77	Concentration [mg/L]	**1690.468**	Concentration [mg/L]
8837.8	Amount [lb/day]	**3806.6**	Amount [lb/day]

* In the absence of measured data, an assumed background concentration of 0.1 mg/L is used based on an Agreed Wasteload Allocation Modeling Methodology between the EPA and State of TN

There is no reasonable potential for treated domestic wastewater to have ammonia above these calculated concentrations, therefore violating water quality criteria. Monthly ammonia monitoring and limits are not required.

6.6. CHLORINATION

6.6.1. Current System – Aerated Lagoon at 0.17 MGD

Chlorination is used to disinfect the wastewater in order to protect the receiving stream from pathogens. Because chlorine can be toxic to aquatic life, the Division limits residual chlorine. However, when water quality is not the limiting factor due to the large dilution afforded by the receiving stream, an effluent concentration of 2.0 mg/L shall not be exceeded as an operational control of treatment facilities.

$$\frac{0.019\ (Qd + Qs)}{Qd} = Limit\ (mg/L) = \frac{0.019(0.17 + 90.12)}{0.17} = 10.09\ mg/L$$

Where:

0.019 mg/L	=	acute instream protection value
90.12	=	Qs – 1Q10 flow of receiving stream (MGD)
0.17	=	Qd – design flow of STP (MGD)

This calculation shows that the effluent limit of 2.0 mg/L, based on good operational practices, is more stringent than the calculated water quality-based effluent limit of 10.09 mg/L. Therefore, the 2.0 mg/L limit applies.

6.6.2. New System – Sequencing Batch Reactor at 0.33 MGD

Chlorination is used to disinfect the wastewater in order to protect the receiving stream from pathogens. Because chlorine can be toxic to aquatic life, the Division limits residual chlorine. However, when water quality is not the limiting factor due to the large dilution afforded by the receiving stream, an effluent concentration of 2.0 mg/L shall not be exceeded as an operational control of treatment facilities.

$$\frac{0.019\ (Qd + Qs)}{Qd} = Limit\ (mg/L) = \frac{0.019(0.33 + 90.12)}{0.33} = 5.03\, mg/L$$

Where:

0.019 mg/L	=	acute instream protection value
90.12	=	Qs – 1Q10 flow of receiving stream (MGD)
0.33	=	Qd – design flow of STP (MGD)

This calculation shows that the effluent limit of 2.0 mg/L, based on good operational practices, is more stringent than the calculated water quality-based effluent limit of 5.03 mg/L. Therefore, the 2.0 mg/L limit applies.

6.7. TOTAL NITROGEN AND TOTAL PHOSPHORUS

Nutrients are naturally occurring and essential components of healthy aquatic systems. Excessive amounts of nutrients, however, can impact water quality. The enrichment of a waterbody with nutrients, called eutrophication, can result in dense, rapidly multiplying growths, or blooms, of algal species and other nuisance aquatic plants. These have potential for negatively impacting the habitat for fish and aquatic life and degrading the water quality for drinking water supply and recreation uses. These impacts can present both locally from an individual activity and much further downstream from the cumulative impact of multiple activities. The Division has therefore developed and begun to implement a strategy to accomplish long-term nutrient reduction in Tennessee waters. The strategy, referred to as the Tennessee Nutrient Reduction Framework (NRF), contains proposed rationale and the methodology for implementing the strategy within a watershed area. Consequently, the Framework considers impacts from both point and non-point sources of nutrients and recommends possible reduction goals for both point and non-point sources. The NRF approach to nutrient reduction is intended to utilize an adaptive management approach in consideration of the facts presenting within a watershed and reevaluation of the effectiveness of

progress being made. Regular reassessments of goals and action plans will be conducted by reviewing monitoring data, modeling results and other measures of success. As additional data becomes available (such as WWTP effluent characterization and instream water quality data), model results can be re-evaluated.

Therefore, for purposes of implementing this strategy, the Division is imposing a minimum of quarterly effluent characterization for total nitrogen and total phosphorus on all discharges of treated domestic wastewater. These values will be used to reevaluate the nutrient loads from discharges within a watershed over time for comparison with those loads from non-point sources.

6.8. *E. COLI*

Disinfection of wastewater is required to protect the receiving stream from pathogenic microorganisms. *E. coli* is used as an indicator organism as a measure of the bacteriological health of a receiving stream and the effectiveness of disinfection. Both the geometric mean and daily maximum are limited for *E. coli* in accordance with Rule 0400-40-03-.03. The *E. coli* daily maximum limit of 487 colony forming units per 100 mL applies to lakes and exceptional Tennessee waters.

In November 2022, the Tennessee Board of Water Quality, Oil, and Gas adopted a new maximum criterion to align with U.S. Environmental Protection Agency national recommended criteria. That criterion will apply to Tennessee waters to protect the recreation use designation effective March 17, 2024, contingent on EPA approving this change to Tennessee's state water quality standards. The new criteria establishes that 410 #/100 ml shall not be exceeded more often than in 10% of samples during any 30-day interval. The Division proposes to apply the 410 as a daily maximum value in order for Town of Chapel Hill to demonstrate it is not negatively impacting recreational use of the Duck River.

Tennessee has historically applied water quality standards for pathogens at the outfall of POTWs so that a discharger can demonstrate that it is not contributing to any violation of the criterion in the receiving waterbody. This is consistent with the state Water Quality Control Act requiring permits to impose monitoring and reporting sufficient for the permittee to demonstrate that the discharge is upholding citizens' right of access to clean water. The Division has also historically imposed *E.coli* water quality standards to discharge pipes in consideration that well maintained and operated disinfecting systems can consistently achieve high

levels of pathogen reduction. Town of Chapel Hill's performance supports this consideration.

The discharge monitoring report summary in Appendix 2 reflects that Town of Chapel Hill's disinfecting system is capable of reducing pathogens below this value.

7. COLLECTION SYSTEMS

7.1. COLLECTION SYSTEM CERTIFIED OPERATOR

Both current and new collections system shall be operated under the supervision of a Grade I certified collection system operator in accordance with the Water Environmental Health Act of 1984.

7.2. COLLECTION SYSTEM OPERATION

For the purposes of demonstrating proper operation of the collection, transmission and treatment system, the permit treats releases separately from sanitary sewer overflows and bypass. State regulations at 0400-40-05-.07(2) establish "standard conditions". These standard conditions include 0400-40-05-.07(2)(n) that sets forth specific language prohibiting sanitary sewer overflows (defined in the regulations as a "discharge") and standard conditions in 0400-40-05-.07(2)(l) and (m) pertaining to bypass. While the regulations prohibit sanitary sewer overflow (*i.e.*, discharges that reach or are likely to reach receiving waters) it does not prohibit "releases" that do not reach or are not likely to reach receiving waters. However, releases that do not reach receiving waters may be indicative of other problems, such as improper operation and maintenance of the sewer system. Whether another violation occurs or whether, for example, there is an unavoidable accident (see, e.g., § 69-3-114(a)), will involve case-specific evaluations. Regardless, the permit assures, without waiving rights to pursue other violations associated with a release, as applicable, that the permittee would, at a minimum be reporting and responding to releases. Any release potentially warrants permittee mitigation of human health risks via direct or indirect contact and may demonstrate a hydraulic problem in the system that warrants permittee consideration as part of proper operation and maintenance of the system.

Proper operation and maintenance of the collection system may include, but is not limited to:

1. A comprehensive collection system map showing all drainage areas, manholes, pump stations (number and size of pumps), flow meters, chronic

sanitary sewer overflow and release locations, miles of collection system, material and diameter of construction, and other relevant system elements.
2. Rainfall data at location(s) using method(s) representative of precipitation within the collection system area.
3. Flow meters at locations in the collection system that would enable drainage area analysis and prioritization based on the amount of inflow and infiltration (I/I) observed.
4. A collection system hydraulic model that predicts I/I problems in response to rainfall events and the effects of new conditions.

When determining if a location experiences chronic sanitary sewer overflows or releases, the term "event(s)" includes dry weather overflows, wet weather overflows, dry weather releases and wet weather releases.

7.3. LOW PRESSURE SYSTEM OWNERSHIP/CONTROL

On May 15, 2022, Tennessee Rule 0400-40-05 became effective. In those rules, clarifying language was added regarding low pressure systems. The Board received a comment during the rulemaking process noting that the inclusion of ownership or control of low pressure systems in Tennessee Rule 0400-40-06 governing land based disposal systems should be included Tennessee Rule 0400-40-05 which governs discharging systems. The response to that comment is included below to provide direction to municipal agencies in implementing this condition of the permit.

The Board agrees, and has added the following to Rule 0400-40-05-.07(2)(c) concerning proper operation and maintenance, "Low pressure pumps, low pressure tanks, septic tank effluent pumps (STEP), STEP tanks, and septic tank effluent gravity tanks are integral to the treatment and conveyance of sewage in a low-pressure system design, and shall be owned or under control of the municipality, other body of government, public utility district, or a privately-owned public utility demonstrating lawful jurisdiction over the service area." This permit condition is not applicable to pumps and appurtenances that are service lines to other than a low-pressure public system. This condition applies to sewer projects or extensions that are approved for construction after the effective date of the permit.

While the Board encourages direct ownership of the low pressure pumps and tanks, it does recognize that in some cases, operational control without direct asset ownership may suffice. The Board acknowledges that operational control may be implemented collectively by multiple local agencies. Operational control for

privately-owned low pressure pumps and appurtenances appropriately includes the following:

- *Legal mechanism e.g. local regulations, ordinance, plumbing codes, resolution etc. that provides the authority to:*
  - *Deny the use of low pressure pumps and tanks*
  - *Establish and enforce design standards*
  - *Access the site and equipment (including inspection)*
  - *Obtain remedies for non-compliance*
  - *Conduct an emergency response*
- *Plans review process to ensure compliance with the locally established design standards (including inspection of installation)*
- *Construction, inspection, and approval process*
- *Preventative and emergency maintenance program*

In addition, all components of the sewerage system must be owned by a municipality, other body of government, public utility district, or a privately-owned public utility demonstrating lawful jurisdiction over the service area in accordance with Rule 0400-40-16-.02(8).

8. OTHER PERMIT REQUIREMENTS AND CONDITIONS

8.1. CERTIFIED WASTEWATER TREATMENT OPERATOR

Both current and new waste treatment facilities shall be operated under the supervision of a Grade II certified wastewater treatment operator in accordance with the Water Environmental Health Act of 1984. Operator grades are under jurisdiction of the Water and Wastewater Operators Certification Board. This NPDES permit is under jurisdiction of the Tennessee Board of Water Quality, Oil and Gas. Operator grades are rated and recommended by the Division of Water Resources pursuant to Rule 0400-49-01 and are included in this fact sheet for reference. The grades are intentionally not specified in the permit so that the operation certification board can authorize changes in grade without conflicting with this permit.

8.2. PRETREATMENT PROGRAM

The Town of Chapel Hill has received an exemption from development of a pretreatment program due to the lack of any significant industrial users.

Narrative conditions will be included for conducting and submitting an industrial waste survey. The drafted permit will include a due date for these reports based on the anticipated effective date. If permit issuance is delayed, these dates will be adjusted accordingly.

8.3. BIOSOLIDS MANAGEMENT PRACTICES

The Clean Water Act (CWA) requires that any NPDES permit issued to a publicly owned treatment works or any other treatment works treating domestic sewage shall comply with 40 CFR § 503, the federal regulation governing the use and disposal of sewage sludge. It is important to note that "biosolids" are sewage sludge that have been treated to a level so that they can be land applied.

The language in **section 3.3.** of the permit, relative to biosolids management, a CWA requirement, allows the "permitting authority" under 40 CFR § 503.9(p) to be able to enforce the provisions of § 503. The "permitting authority" relative to Part 503 is either a state that has been delegated biosolids management authority or the applicable EPA Region; for Tennessee it is EPA Region 4.

Tennessee regulates the land application of non-exceptional quality biosolids under state rules, Chapter 0400-40-15. The state rules became effective on June 30, 2013. Under these state rules, all facilities that land apply non-exceptional quality biosolids must obtain a biosolids permit from the division. The land application of non-exceptional quality biosolids under state rules is regulated through either a general permit or by an individual permit. Questions about the division's biosolids regulations and permitting program should be directed to the State Biosolids Coordinator at:

Division of Water Resources
State Biosolids Coordinator
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102
615-532-0625

8.4. PERMIT TERM

In order to meet the target reissuance date for the Duck-Upper watershed and following the directives for the Watershed Management Program initiated in January 1996, the permit will be issued to expire in 2029.

8.5. ELECTRONIC REPORTING

The NPDES Electronic Reporting Rule (eRule), which became effective on December 21, 2016, replaces most paper-based reporting requirements with electronic reporting requirements. NetDMR allows NPDES permittees to submit DMRs electronically to EPA through a secure internet application and has been

approved by Tennessee as the official electronic reporting tool for DMRs. The permittee has been reporting electronically via NetDMR since July 18, 2017.

Monitoring results shall be recorded monthly and submitted monthly using Discharge Monitoring Reports (DMRs) based on the effluent limits in **section 1.1** of the permit. DMRs and DMR attachments, including laboratory data and sanitary sewer overflow reports, shall be submitted electronically in NetDMR or other electronic reporting tool approved by the State, no later than the 15th of the month following the end of the monitoring period. All NPDES program reports must be signed and certified by a responsible official or a duly authorized representative, as defined in 40 CFR § 122.22.

According to 40 CFR § 127.15, states have the flexibility to grant temporary or episodic waivers from electronic reporting to NPDES permittees who are unable to meet the electronic reporting requirements. To obtain an electronic reporting waiver, an electronic reporting waiver request must be submitted by email to DWRwater.compliance@tn.gov or by mail to the following address:

Division of Water Resources
Compliance and Enforcement Unit – NetDMR Waivers
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243-1102

For contact and training information about NetDMR electronic reporting, visit the Division's website here.

The permit language has been modified to accommodate the implementation of the MyTDEC Forms electronic reporting tool. For more information, visit EPA's website on eReporting requirements.

8.6. ANTIDEGRADATION STATEMENT / WATER QUALITY STATUS

Tennessee's Antidegradation Statement is found in the Rules of the Tennessee Department of Environment and Conservation, Chapter 0400-40-03-.06. It is the purpose of Tennessee's standards to fully protect existing uses of all surface waters as established under the Act.

Stream determinations for this permit action are associated with the waterbody segment identified by the Division as segment ID# TN06040002010_1000.

The Division has made a determination of the receiving waters associated with the subject discharge(s) and has found the river to be an exceptional Tennessee water. No permanent degradation of water quality above the level of *de minimis* will be allowed unless the applicant demonstrates to the Division that the degradation is for necessary economic or social development and will not interfere with or become injurious to any existing uses. The specific requirements for this demonstration are described in the Rules of the Tennessee Department of Environment and Conservation, Chapter 0400-40-03-.06(4).

Chapel Hill evaluated treatment alternatives in an engineering report in 2019. To comply with antidegradation, they will be installing a higher level of treatment to maintain existing loads and/or meet de minimis levels of degradation.

No Total Maximum Daily Loads (TMDLs) have been developed and approved for this waterbody segment.

APPENDIX 1 –PREVIOUS PERMIT LIMITS

PARAMETERS	MONTHLY AVERAGE CONCENTRATION (MG/L)	MONTHLY AVERAGE AMOUNT (LB/DAY)	WEEKLY AVERAGE CONCENTRATION (MG/L)	WEEKLY AVERAGE AMOUNT (LB/DAY)	DAILY MAXIMUM CONCENTRATION (MG/L)	DAILY MAXIMUM CONCENTRATION (LB/DAY))	MINIMUM PERCENT REMOVAL	MEASUREMENT FREQUENCY
BOD_5	30	43	40	57	45	64	65% (monthly average)	Weekly
Total Suspended Solids	100	142	110	156	120	170	—	Weekly
Dissolved Oxygen	1.0 (daily min) instantaneous	—	—	—	—	—	—	5/week
Total Chlorine Residual	—	—	—	—	2.0	—	—	5/week
Total Nitrogen	—	—	—	—	Report (qtr avg)	Report (qtr avg)	—	Quarterly
Total Phosphorus	—	—	—	—	Report (qtr avg)	Report (qtr avg)	—	Quarterly
E. coli (#/100mL)	126 (#/100 mL)	—	—	—	487 (#/100 mL)	—	—	Weekly
Settleable Solids (mL/L)	—	—	—	—	1.0 (mL/L)	—	—	5/week
pH (standard units)	6.0 – 9.0	—	—	—	—	—	—	5/week
Flow (MGD):								
Influent	Report	—	—	—	Report	—	—	Daily
Effluent	Report	—	—	—	Report	—	—	Daily
Sanitary Sewer Overflows, Total Occurrences			Report					continuous
Dry Weather Overflows, Total Occurrences			Report					continuous
Wet Weather Overflows, Total Occurrences			Report					continuous
Bypass of Treatment Facility			Report					continuous

APPENDIX 2 – DMR SUMMARY

TN0064670 - Town of Chapel Hill

Outfall 001 - G	BOD5 - Effluent						BOD5 - Influent		BOD5 - Percent Removal
	Monthly Avg (lb/d)	Weekly Avg (lb/d)	Daily Max (lb/d)	Monthly Avg (mg/L)	Weekly Avg (mg/L)	Daily Max (mg/L)	Monthly Avg (mg/L)	Daily max. (mg/L)	Monthly avg. (%)
12/31/2023	52.1	65	65	72.4	88.3	88.3	166.7	181.8	48.9
11/30/2023	25.6	29.3	29.3	35.5	40.5	40.5	153.7	187.6	76.9
10/31/2023	22.8	23.9	23.9	34.4	34.6	35.4	115.1	145.4	65.7
09/30/2023	28.7	46.1	46.1	39.7	63	63	124	136.5	52.2
08/31/2023	28.1	47.7	47.7	32	34.2	34.2	129.9	171.6	67.3
07/31/2023	37.1	67.6	67.6	33	39.6	35.7	140.8	151.3	71.7
06/30/2023	30.4	44.7	44.7	35.7	34.9	39.6	125.3	224.3	50.9
05/31/2023	30.1	35.5	35.5	37.7	50.5	50.5	159.8	208.5	76.4
04/30/2023	37.4	48.4	61.6	45.5	49.8	49.8	128.2	158.4	64.5
03/31/2023	89.9	163.6	163.6	80.9	54.8	130.4	125.5	157.1	35.6
02/28/2023	84	112.8	112.8	76.3	86.3	86.3	99.5	123.3	23.6
01/31/2023	90.1	119.2	119.2	75.5	94.6	94.6	129.9	177.6	41.9
12/31/2022	230.5	492.6	492.6	69.3	91.5	91.5	120.7	171.1	42.6
11/30/2022	56.3	84	56	76.9	90.5	90.5	149.9	188.3	48.7
10/31/2022	156.2	399.3	399.3	73.1	85.2	85.2	139.4	234.7	47.5
09/30/2022	31	42.1	42.1	51.1	61.9	61.9	135.9	168.2	62.4
08/31/2022	46.7	148	148	49.4	84.1	84.1	111.8	198.6	55.8
07/31/2022	35.5	57.4	57.4	53.2	66.2	66.2	109.9	127.4	51.6
06/30/2022	32.2	45.5	45.5	61.7	93.6	93.6	125.4	141.6	50.8
05/31/2022	26.6	37.1	37.1	43.3	55.7	55.7	195.8	242.6	72
04/30/2022	18.6	34.3	34.3	31.4	63.2	63.2	192.8	271.5	59.2
03/31/2022	38.3	56.1	71.9	40.4	56.5	61.5	137.6	184.3	49.7
02/28/2022	64.2	200.9	200.9	30	40.9	40.9	235.6	252	82.6
01/31/2022	33.6	67.8	65	15.1	39.5	19.6	57.1	62.3	67.3
12/31/2021	35.8	36.4	67.8	45.1	58.4	58.4	158	180	63.4
11/30/2021	11.1	15.5	15.5	19.8	28	28	143	162	82.7
10/31/2021	47.4	105.5	105.5	51.3	102	102	121	141	15.6
09/30/2021	18.4	15.7	55	34.4	27.2	102	142	229	35.8
08/31/2021	36.2	91.8	91.8	41.5	65.9	65.9	110	173	27.8
07/31/2021	13.6	18.2	18.2	25.2	38.1	38.1	121	153	62.7
06/30/2021	32.7	61.3	61.3	47.3	66.5	66.5	83	125	37
05/31/2021	24.5	73.9	36.9	50.4	73.9	73.9	137	152	48.7
04/30/2021	715.9	3461.9	3461.9	48.4	72.8	72.8	96	138	< 0
03/31/2021	122.4	301.1	301.1	74.3	92.3	92.3	106	185	< 0
02/28/2021	26.1	20.1	31.1	60.9	82	82	228	327	57.5
01/31/2021	17.9	29.3	29.3	41.6	52.7	52.7	179	213	66.6
12/31/2020	13.2	18.1	18.1	24	27.3	32.3	233	292	83.3
11/30/2020	7.2	8.6	8.6	15.7	20.1	20.1	233	284	89.6
10/31/2020	10.8	35.9	35.9	14.51	31.9	31.9	133	173	81.5
09/30/2020	7.6	10.5	10.5	12.9	14.3	14.3	134	238	83
08/31/2020	11.6	14.1	14.1	21.1	28.3	28.3	162	200	79.3
07/31/2020	17.7	22.3	22.3	28.5	33.3	33.3	149	251	63.6
06/30/2020	19.34	19.34	42.85	32.7	32.7	62.05	139	25	76.4
05/31/2020	16.13	28.5	28.45	29.97	29.97	55.02	121	145	75.2
04/30/2020	68.68	68.68	205.17	31.46	31.46	34.05	113	119	72.3
03/31/2020	27.69	27.69	47.63	31.13	31.13	33.28	109	115	71.3
02/29/2020	110	110	195	38.34	38.34	47.76	102	153	45.1
01/31/2020	29.56	29.56	43.71	29.73	29.56	33.13	112	132	68.6
12/31/2019	15.64	15.64	18	30.99	30.99	34.25	114	132	68.26
11/30/2019	15.74	15.74	17.91	28.58	28.58	31.44	104	114	80.7
10/31/2019	14.81	14.81	15.59	29.54	29.54	34.61	107	120	68
09/30/2019	19.08	19.08	20.34	33.11	33.11	35.73	91	133	49
08/31/2019	15.29	15.29	18.47	23.97	23.97	27.58	121	150	79
07/31/2019	12.65	12.65	16.43	23.95	23.95	25.34	94	103	72
06/30/2019	10.69	19.6	16.3	19.6	19.6	23.7	102	115	79
05/31/2019	14.22	14.22	20.15	24.56	24.56	32.11	99	115	80
Std. dev.	97.8	458.3	457.9	17.8	24.2	26.3	37.3	55.9	16.9
Min:	7.2	8.6	8.6	12.9	14.3	14.3	57.1	25	15.6
Max:	715.9	3461.9	3461.9	80.9	102	130.4	235.6	327	89.6
Count:	56	56	56	56	56	56	56	56	56
Average:	51.5	128.9	134.8	40.3	50.4	54.8	134.0	170.6	61.6
Permit Limit:	<=43	<=57	<=64	<=30	<=40	<=45	Report	Report	>=65%

Exceeds limit

NODI9 - Conditional Monitoring (not required this period)
NODIC - No Discharge

Outfall 001 - G	Bypass		Total Residual Chlorine - Effluent	E. Coli - Effluent		Flow - Effluent		Flow - Influent	
	Monthly (occur/mo)	Monthly (gal/mo)	Daily max. (mg/L)	Monthly Geometric Mean (#/100mL)	Daily max. (#/100mL)	Monthly avg (MGD)	Daily max (MGD)	Monthly avg (MGD)	Daily max (MGD)
12/31/2023			1.93	1.3	3	0.093	0.139	0.173	0.195
11/30/2023			1.58	1.5	5.2	0.088	0.121	0.146	0.178
10/31/2023			1.2	1	1	0.081	0.097	0.113	0.165
09/30/2023			1.92	1	1	0.085	0.14	0.132	0.166
08/31/2023			1.98	1.2	2	0.108	0.176	0.15	0.223
07/31/2023			1.44	1.4	6	0.124	0.227	0.151	0.231
06/30/2023			2	1	1	0.096	0.172	0.126	0.18
05/31/2023			1.54	1.7	4.1	0.113	0.24	0.144	0.238
04/30/2023			1.93	1.2	2	0.103	0.137	0.158	0.213
03/31/2023			1.9	20.7	2419.6	NODI 9	NODI 9	0.152	0.261
02/28/2023			1.57	6.3	19.9	0.126	0.228	0.164	0.241
01/31/2023			1.15	22	118.7	0.143	0.247	0.16	0.228
12/31/2022			1.74	9.2	45.9	0.212	0.646	0.213	0.646
11/30/2022			1.71	2.1	19.5	0.09	0.157	0.119	0.24
10/31/2022			1.49	1.3	3.1	0.092	0.562	0.121	0.155
09/30/2022			1.34	1.3	3.1	0.074	0.098	0.126	0.137
08/31/2022			1.24	1	1	0.083	0.208	0.128	0.208
07/31/2022			1.22	1.2	3	0.081	0.185	0.118	0.285
06/30/2022			1.13	1.3	3	0.064	0.12	0.108	0.14
05/31/2022			1.38	1	1	0.072	0.118	0.103	0.127
04/30/2022			1.26	1.2	2	0.079	0.177	0.104	0.177
03/31/2022			1.25	9.3	50.1	0.1	0.242	0.118	0.242
02/28/2022			1.04	2	4	0.193	0.818	0.206	0.818
01/31/2022			1.8	7.3	46.8	0.241	0.61	0.249	0.61
12/31/2021			1.9	1.6	3.1	0.096	0.235	0.11	0.235
11/30/2021			1.3	1	1	0.069	0.099	0.109	0.128
10/31/2021			1.2	1.2	2	0.096	0.711	0.113	0.144
09/30/2021			1.2	1	1	0.076	0.179	0.118	0.179
08/31/2021			1.8	1.7	5.2	0.087	0.242	0.115	0.242
07/31/2021	0	0	1.7	1	1	0.074	0.137	0.113	0.225
06/30/2021	0	0	1.7	1.5	2	0.118	1.228	0.109	0.19
05/31/2021	0	0	1.8	2.6	21.3	0.076	0.353	0.105	0.213
04/30/2021	0	0	1.9	61.6	870.4	1.37	8.13	0.14	0.463
03/31/2021	0	0	1.5	11.5	2419.6	1.113	7.295	0.227	0.979
02/28/2021	0	0	1.3	29	196.8	0.08	0.572	0.021	0.253
01/31/2021	0	0	1.8	2.5	39.3	0.056	0.121	0.088	0.107
12/31/2020	0	0	1.8	2.5	30.9	0.072	0.16	0.088	0.15
11/30/2020	0	0	1.8	1	1	0.055	0.096	0.092	0.11
10/31/2020	0	0	1.36	1	1	0.066	0.142	0.107	0.155
09/30/2020	0	0	1.57	1.1	2	0.092	0.808	0.099	0.235
08/31/2020	0	0	1.2	1	1	0.081	0.174	0.101	0.215
07/31/2020	0	0	1.3	1	1	0.169	2.847	0.095	0.244
06/30/2020	0	0	1.08	1	1	0.067	0.174	0.093	0.139
05/31/2020	0	0	1.74	1	1	0.072	0.132	0.092	0.126
04/30/2020	0	0	1.91	< 1	< 1	0.118	0.73	0.14	0.504
03/31/2020	0	0	1.79	< 1	< 1	0.123	0.272	0.173	0.487
02/29/2020	1	45.1	1.71	< 1	< 1	0.35	0.904	0.225	0.532
01/31/2020	0	0	1.83	< 1	< 1	0.163	0.831	0.193	0.568
12/31/2019	0	0	1.92	< 1	< 1	0.085	0.221	0.112	0.258
11/30/2019	NODI C	NODI C	1.99	< 1	< 1	0.069	0.177	0.108	0.194
10/31/2019	0	0	1.62	< 1	< 1	0.07	0.128	0.104	0.122
09/30/2019	0	0	1.41	< 1	< 1	0.063	0.091	0.113	0.171
08/31/2019	0	0	1.66	< 1	< 1	0.064	0.103	0.107	0.193
07/31/2019	0	0	1.64	< 1	< 1	0.088	0.251	0.131	0.308
06/30/2019	0	0	2.2	< 1	< 1	0.073	0.122	0.106	0.151
05/31/2019	0	0	1.38	< 1	< 1	0.074	0.137	0.108	0.132
Std. dev.	0.2	8.7	0.3	10.5	513.6	0.2	1.4	0.0	0.2
Min:	0	0	1.04	1	1	0.055	0.091	0.021	0.107
Max:	1	45.1	2.2	61.6	2419.6	1.37	8.13	0.249	0.979
Count:	27	27	56	56	56	56	56	56	56
Average:	0.0	1.7	1.6	5.1	144.7	0.1	0.6	0.1	0.3
Permit Limit:	Report	Report	<=2	<=120	<=487	Report	Report	Report	Report

Exceeds limit

NODI9 - Conditic
NODIC - No Disc

Outfall 001 - G	Nitrogen - Effluent		Dissolved Oxygen - Effluent	pH - Effluent		Phosphorus - Effluent		Release - Dry Weather	
	Weekly or daily (lb/d)	Daily max. (mg/L)	Min. (mg/L)	Min. (SU)	Max. (SU)	Daily Max (lb/d)	Daily max (mg/L)	Monthly (occur/mo)	Monthly (gal/mo)
12/31/2023	NODI 9	NODI 9	7.4	7.7	8	NODI 9	NODI 9		
11/30/2023	7	9.6	6.2	7.6	8.2	4.6	6.3		
10/31/2023	NODI 9	NODI 9	6.2	7.8	8.1	NODI 9	NODI 9		
09/30/2023	13.9	19.7	2	7.1	8	4.7	6.6		
08/31/2023	NODI 9	NODI 9	3.1	7.5	7.8	NODI 9	NODI 9		
07/31/2023	NODI 9	NODI 9	2.7	7.5	7.7	NODI 9	NODI 9		
06/30/2023	NODI 9	NODI 9	2.8	7.5	7.7	NODI 9	NODI 9		
05/31/2023	8	12.9	4.1	7.4	7.8	2.9	4.6		
04/30/2023	NODI 9	NODI 9	3.9	7.4	7.8	NODI 9	NODI 9		
03/31/2023	NODI 9	NODI 9	2.6	7.2	7.7	NODI 9	NODI 9		
02/28/2023	48	32.4	5	7.8	8.3	8	5.4		
01/31/2023	NODI 9	NODI 9	7.7	7.9	8.2	NODI 9	NODI 9		
12/31/2022	NODI 9	NODI 9	5.7	7.5	8.1	NODI 9	NODI 9		
11/30/2022	7.3	12.8	2.6	7.3	8	2.6	4.5		
10/31/2022	NODI 9	NODI 9	2.2	7.4	8	NODI 9	NODI 9		
09/30/2022	NODI 9	NODI 9	4.1	7.6	8	NODI 9	NODI 9		
08/31/2022	12	6.9	5.3	7.5	8	8.5	4.9		
07/31/2022	NODI 9	NODI 9	4.8	7.8	8	NODI 9	NODI 9		
06/30/2022	NODI 9	NODI 9	4.9	7.8	7.9	NODI 9	NODI 9		
05/31/2022	4.5	7	2.9	7.4	7.9	0.8	1.2		
04/30/2022	NODI 9	NODI 9	2.4	7.1	7.7	NODI 9	NODI 9		
03/31/2022	NODI 9	NODI 9	2.4	7.4	8.1	NODI 9	NODI 9		
02/28/2022	9.5	16.1	4.5	7.6	8	1.9	3.2		
01/31/2022	NODI 9	NODI 9	1.4	7.5	7.7	NODI 9	NODI 9		
12/31/2021	NODI 9	NODI 9	2.6	7.4	7.7	NODI 9	NODI 9		
11/30/2021	2.8	4.9	2.7	7.3	7.5	3.1	5.4		
10/31/2021	NODI 9	NODI 9	2.1	7	7.4	NODI 9	NODI 9		
09/30/2021	NODI 9	NODI 9	2.1	7.2	7.5	NODI 9	NODI 9		
08/31/2021	NODI 9	NODI 9	3.6	7.4	7.8	NODI 9	NODI 9		
07/31/2021	4.5	9.5	3.5	7.4	7.7	2	4.2	0	0
06/30/2021	NODI 9	NODI 9	3.4	7.4	7.8	NODI 9	NODI 9	0	0
05/31/2021	NODI 9	NODI 9	2.36	7.1	8.6	NODI 9	NODI 9	1	25500
04/30/2021	3.37	6.5	6.1	7.02	8.37	1.44	2.79	0	0
03/31/2021	NODI 9	NODI 9	5.4	7.5	8	NODI 9	NODI 9	1	10000
02/28/2021	NODI 9	NODI 9	9.6	7.6	8.3	NODI 9	NODI 9	0	0
01/31/2021	7.8	25.4	9.81	7.9	8.2	1.1	3.5	0	0
12/31/2020	NODI 9	NODI 9	10.4	8	8.2	NODI 9	NODI 9	0	0
11/30/2020	NODI 9	NODI 9	8.5	7.98	8.26	NODI 9	NODI 9	0	0
10/31/2020	2.9	4.6	7.8	7.6	8.1	3	4.8	0	0
09/30/2020	NODI 9	NODI 9	7.6	7.6	8.1	NODI 9	NODI 9	0	0
08/31/2020	2.7	4.3	4.2	7.5	7.8	3.1	5.1	0	0
07/31/2020	NODI 9	NODI 9	4.6	7.5	7.8	NODI 9	NODI 9	0	0
06/30/2020	NODI 9	NODI 9	3.68	7.59	7.8	NODI 9	NODI 9	0	0
05/31/2020	NODI 9	NODI 9	5.29	7.25	7.97	NODI 9	NODI 9	0	0
04/30/2020	NODI 9	NODI 9	4.46	7.09	8.65	NODI 9	NODI 9	0	0
03/31/2020	0	0	7.62	7.37	8.89	0	0	0	0
02/29/2020	0	0	7.82	7.36	7.72	0	0	0	0
01/31/2020	0	0	8.29	7.52	8.16	0	0	0	0
12/31/2019	13.3	13.3	8.77	7.58	8.86	4.29	4.29	0	0
11/30/2019	NODI 9	NODI 9	8	7.61	8.53	NODI 9	NODI 9	NODI C	NODI C
10/31/2019	0	0	6.11	7.47	8.51	0	0	0	0
09/30/2019	0	0	4.08	7.44	8.44	0	0	0	0
08/31/2019	0	0	3.32	7.09	8.62	0	0	0	0
07/31/2019	0	0	3.15	7.19	8.01	0	0	0	0
06/30/2019	0	0	4.33	7.53	8.02	0	0	0	0
05/31/2019	0	0	3.68	7.46	8.32	0	0	0	0
Std. dev.	9.8	8.6	2.3	0.2	0.3	2.4	2.4	0.3	5195.3
Min:	0	0	1.4	7	7.4	0	0	0	0
Max:	48	32.4	10.4	8	8.89	8.5	6.6	1	25500
Count:	56	56	56	56	56	56	56	27	27
Average:	6.1	7.7	4.9	7.5	8.0	2.2	2.8	0.1	1365.4
Permit Limit:	Report	Report	>=1.0	>=6.0	<=9.0	Report	Report	Report	Report

Exceeds limit

NODI 9 - Conditic
NODI C - No Disc

Outfall 001- G	Release - Wet Weather		Setteable Solids, Effluent	Total Suspended Solids - Effluent Gross					
	Monthly (occur/mo)	Monthly (gal/mo)	Daily max. (mL/L)	Monthly Avg (lb/d)	Weekly avg (lb/d)	Weekly avg (lb/d)	Monthly avg. (mg/L)	Weekly avg (mg/L)	Daily max. (mg/L)
12/31/2023			< .1	7.8	9.5	9.5	10.8	13	13
11/30/2023			< .1	6.6	9.1	9.1	9.2	13	13
10/31/2023			< .1	5.6	8.2	8.2	8.5	12	12
09/30/2023			< .1	3	5.6	4.7	4	8	6
08/31/2023			< .1	8.9	18.1	18.1	9.8	15	15
07/31/2023			< .1	10	14	14	9.3	14	14
06/30/2023			< .1	10.1	14.3	14.3	11.8	17	17
05/31/2023			0.1	21.6	32.3	32.3	27.6	52	52
04/30/2023			0.2	27.9	34.4	34.4	35.3	50	50
03/31/2023			0.1	24.1	26	38	26.2	39.4	38
02/28/2023			0.1	19.6	21.7	21.7	18.3	22	22
01/31/2023			0.1	11.8	11	15.3	9.8	11	11
12/31/2022			0.1	23.3	37.7	37.7	8.5	11	37.7
11/30/2022			0.1	6	10.3	10.3	8	16	16
10/31/2022			0.1	10.3	23.3	23.3	7.9	15	15
09/30/2022			0.1	4.3	7.8	7.8	6.9	16	12
08/31/2022			0.1	5.8	8	8	9.7	14.5	16
07/31/2022			0.1	8	10	10	12.4	14.5	14.5
06/30/2022			0.1	4.8	7.1	7.1	8.9	14.3	14.3
05/31/2022			0.1	7.6	17.3	17.3	12.1	27	27
04/30/2022			1	22.9	41.5	41.4	32.3	45	45
03/31/2022			0.5	26	50.2	52.8	26.4	52	52
02/28/2022			0.2	30.7	117.8	117.8	13.6	24	24
01/31/2022			0.1	6.2	7	10.1	3.6	7	5.5
12/31/2021			0.2	9.8	26.5	26.5	13.5	42	42
11/30/2021			0.1	2	2.8	2.8	3.6	5	5
10/31/2021			0.1	18	18	18	8.5	15	15
09/30/2021			0.1	3.5	5.9	5.9	6.6	9	11
08/31/2021			0.1	4.7	9.8	9.8	6.1	8.5	8.5
07/31/2021	0	0	0.2	3.4	6.1	6.1	5.7	11	11
06/30/2021	0	0	0.2	6.5	18.9	18.9	8.6	20.5	20.5
05/31/2021	0	0	0.6	9.4	18	36	19.3	21	36
04/30/2021	0	0	0.3	158.2	713.3	713.3	26.4	45	45
03/31/2021	3	695000	0.3	57.7	141.1	141.1	34.8	50	50
02/28/2021	0	0	0.1	14.4	35	16	32.6	35	35
01/31/2021	0	0	< .1	9	8.5	28	22.8	28	28
12/31/2020	0	0	0.1	5.1	6	8.5	9.8	9	21
11/30/2020	0	0	0.1	3.4	5	5	7.5	10	10
10/31/2020	0	0	0.1	3.4	7.9	7.9	6	12	12
09/30/2020	0	0	0.1	4	10	5.3	7.3	10	10
08/31/2020	0	0	0.1	5.3	10.1	10.1	9.4	16.5	16.5
07/31/2020	0	0	0.2	9.7	13.7	13.7	14.4	21	21
06/30/2020	0	0	0.1	8.7	8.7	9.8	16.8	16.8	21
05/31/2020	0	0	0.1	8.5	8.5	17.6	15	15	34
04/30/2020	0	0	4	15.9	15.9	42.6	8	8	11
03/31/2020	0	0	< 1	8.5	8.5	20.1	8.5	8.5	13
02/29/2020	0	0	< 1	19.9	19.9	45.1	9.9	9.9	16
01/31/2020	0	0	< 1	28.2	28.2	76.2	10.3	10.3	17
12/31/2019	0	0	< 1	3.4	3.4	5.3	5.3	5.3	8
11/30/2019	NODI C	NODI C	< 1	5.9	5.9	17.8	10.4	10.4	30
10/31/2019	0	0	1	2.8	4.2	4.2	5.3	5.3	7
09/30/2019	0	0	< 1	0.3	0.3	0.6	0.6	0.6	0.9
08/31/2019	0	0	0	6.4	6.4	10	6.4	6.4	10
07/31/2019	0	0	< 1	5.4	5.4	10.4	9.5	9.5	15
06/30/2019	0	0	< 1	5.1	5.1	5.1	9.3	9.3	11
05/31/2019	0	0	< 1	5.5	5.5	8.2	10	10	14
Std. dev.	0.6	133653.8	0.6	21.8	95.1	95.0	8.3	13.3	13.3
Min:	0	0	0	0.3	0.3	0.6	0.6	0.6	0.9
Max:	3	695000	4	158.2	713.3	713.3	35.3	52	52
Count:	27	27	56	56	56	56	56	56	56
Average:	0.1	26730.8	0.3	13.7	30.8	34.1	12.5	18.2	20.5
Permit Limit:	Report	Report	<1.0	<=142	<=156	<=170	<=100	<=110	<=120

Exceeds limit

NODI9 - Conditic
NODIC - No Disc

Outfall 001 - G	SSO - Dry Weather			SSO - Dry Weather		
	Monthly (occur/mo)	Monthly (gal/mo)	Monthly (occur/12MCT)	Monthly (occur/mo)	Monthly (gal/mo)	Monthly (occur/12MCT)
12/31/2023	0			0		
11/30/2023	0			0		
10/31/2023	0			0		
09/30/2023	0			0		
08/31/2023	0			0		
07/31/2023	0			0		
06/30/2023	0			0		
05/31/2023	0			0		
04/30/2023	0			0		
03/31/2023	0			0		
02/28/2023	0			0		
01/31/2023	0			0		
12/31/2022	0			0		
11/30/2022	0			0		
10/31/2022	0			0		
09/30/2022	0			0		
08/31/2022	0			0		
07/31/2022	0			0		
06/30/2022	0			0		
05/31/2022	0			0		
04/30/2022	0			0		
03/31/2022	0			0		
02/28/2022	0			0		
01/31/2022	0			0		
12/31/2021	0			0		
11/30/2021	0			0		
10/31/2021	0			0		
09/30/2021	0			0		
08/31/2021	0			0		
07/31/2021	0	0	0	0	0	0
06/30/2021	0	0	0	0	0	0
05/31/2021	0	0	0	0	0	0
04/30/2021	0	0	0	0	0	0
03/31/2021	0	0	0	0	0	0
02/28/2021	0	0	0	0	0	0
01/31/2021	0	0	0	0	0	0
12/31/2020	0	0	0	0	0	0
11/30/2020	0	0	0	0	0	0
10/31/2020	0	0	0	0	0	0
09/30/2020	0	0	0	0	0	0
08/31/2020	0	0	0	0	0	0
07/31/2020	0	0	0	0	0	0
06/30/2020	0	0	0	0	0	0
05/31/2020	0	0	0	0	0	0
04/30/2020	0	0		0	0	
03/31/2020	0	0		0	0	
02/29/2020	0	0		0	0	
01/31/2020	0	0		0	0	
12/31/2019	0	0		0	0	
11/30/2019	NODI C	NODI 9		NODI C	NODI C	
10/31/2019	0	0		0	0	
09/30/2019	0	0		0	0	
08/31/2019	0	0		0	0	
07/31/2019	0	0		0	0	
06/30/2019	0	0		0	0	
05/31/2019	0	0		0	0	
Std. dev.	0.0	0.0	0.0	0.0	0.0	0.0
Min:	0	0	0	0	0	0
Max:	0	0	0	0	0	0
Count:	56	27	15	56	27	15
Average:	0.0	0.0	0.0	0.0	0.0	0.0
Permit Limit:	<=0	Report	Report	<=0	Report	Report

Exceeds limit

NODI9 - Conditic
NODIC - No Disc

Violations Report Summary

NPDES ID(s): TN0064670
State: TN
Major/Minor Indicator: Minor
Violation Date: 05/01/2019 - 01/17/2024
Violation Type(s): DMR Non-Receipt Violation;Effluent Violation;Schedule

Environmental Protection Agency
Integrated Compliance Information System
Violations Report

Created Date: 09/15/2010
Refresh Date: 01/17/2024
rt Version 1.5, Modified: 1/4/2017

TN0064670

Permittee Name:	Town of Chapel Hill	**Primary SIC Code:**	4952	**Permit Issued:**	08/02/2022
Permittee Address:	2202 UNIONVILLE ROAD Chapel Hill, TN 37034	**Primary SIC Desc:**	Sewerage Systems	**Permit Effective:**	09/01/2022
		Primary NAICS Code:	221320	**Permit Expired:**	03/31/2024
Major/Minor Indicator:	Minor	**Primary NAICS Desc:**	Sewage Treatment Facilities	**Permit Status:**	Effective
Compliance Track. Status:	On	**Cognizant Official:**	Cynthia Warner		
DMR Non Receipt Flag:	On	**Cognizant Offcl. Ph.:**	931-364-3959		
RNC Tracking Flag:	On	**Receiving Body:**	Duck-Upper		

Facility Information

Facility Name:	CHAPEL HILL WWTP	**County:**	Marshall	**FRS ID:**	110009786767
Facility Location:	HIGHWAY 99 (NEAR HENRY HORTON STATE PARK)	**Region:**	04	**Federal Facility Ownership:**	N
		State-Region:		**Type of Ownership:**	Municipal or Water District

DMR Non-Receipt Violations

Violation Code	Monitoring Period End Date	DMR Due Date	Limit Set	Parameter	Mon. Loc.	Seas. ID	DMR Value	NODI Code	RNC Det. Code/ RNC Det. Date	RNC Res. Code/ RNC Res. Date	DMR Val. Rec Date
D80	02/29/2020	03/15/2020	001-G	51925 - SSO, Dry Weather	U	1	C1		K 04/15/2020	2 08/04/2020	08/04/2020
D80	02/29/2020	03/15/2020	001-G	51928 - Release [Sewer], Wet Weather	T	1	C1		K 04/15/2020	2 08/04/2020	08/04/2020

Effluent Violations

Violation Code	Monitoring Period End Date	Limit Set	Parameter	Mon. Loc.	Seas. ID	SNC Group	EA Identifier	Value Type/ Stat. Base	Reported Value/Units	% Exceed.	Limit Value/Units	RNC Det. Code/ RNC Det. Date	RNC Res. Code/ RNC Res. Date
E90	12/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1		Q1 MO AVG	52.1 lb/d	21%	<=43 lb/d		
E90	12/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1		Q2 WKLY AVG	65 lb/d	14%	<=57 lb/d		
E90	12/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1		C1 MO AVG	72.4 mg/l	141%	<=30 mg/l		
E90	12/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1		C2 WKLY AVG	88.3 mg/l	121%	<=40 mg/l		

E90	12/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	88.3 mg/l	96%	<=45 mg/l				
E90	12/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	E G	0	1	Q2 DAILY MX	65 lb/d	2%	<=64 lb/d				
E90	12/31/2023	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	48.9 %	46%	>=65 %				
E90	11/30/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	35.5 mg/l	18%	<=30 mg/l				
E90	11/30/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	40.5 mg/l	1%	<=40 mg/l				
E90	10/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	34.4 mg/l	15%	<=30 mg/l	C 10/31/2023	3 10/31/2023		
E90	09/30/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	39.7 mg/l	32%	<=30 mg/l	C 09/30/2023	3 09/30/2023		
E90	09/30/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	63 mg/l	58%	<=40 mg/l				
E90	09/30/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	63 mg/l	40%	<=45 mg/l				
E90	09/30/2023	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	52.2 %	37%	>=65 %				
E90	08/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	32 mg/l	7%	<=30 mg/l	C 09/30/2023	3 09/30/2023		
E90	07/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 WKLY AVG	67.6 lb/d	19%	<=57 lb/d				
E90	07/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	33 mg/l	10%	<=30 mg/l	C 09/30/2023	3 09/30/2023		
E90	07/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	E G	0	1	Q2 DAILY MX	67.6 lb/d	6%	<=64 lb/d	U 07/31/2023	2 09/30/2023		
E90	06/30/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	35.7 mg/l	19%	<=30 mg/l	V 06/30/2023	3 06/30/2023		
E90	06/30/2023	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	50.9 %	40%	>=65 %				
E90	05/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	37.7 mg/l	26%	<=30 mg/l	V 05/31/2023	3 05/31/2023		
E90	05/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	50.5 mg/l	26%	<=40 mg/l				
E90	05/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	50.5 mg/l	12%	<=45 mg/l				
E90	04/30/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 WKLY AVG	61.6 lb/d	8%	<=57 lb/d				
E90	04/30/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	45.5 mg/l	52%	<=30 mg/l	T 04/30/2023	3 04/30/2023		

E90	04/30/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	49.8 mg/l	25%	<=40 mg/l		
E90	04/30/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	49.8 mg/l	11%	<=45 mg/l		
E90	04/30/2023	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	64.5 %	1%	>=65 %		
E90	03/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	89.9 lb/d	109%	<=43 lb/d	T 03/31/2023	3 03/31/2023
E90	03/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 WKLY AVG	153.6 lb/d	169%	<=57 lb/d		
E90	03/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	80.9 mg/l	170%	<=30 mg/l	T 03/31/2023	3 03/31/2023
E90	03/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	54.8 mg/l	37%	<=40 mg/l		
E90	03/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	130.4 mg/l	190%	<=45 mg/l		
E90	03/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 DAILY MX	163.6 lb/d	156%	<=64 lb/d	R 03/31/2023	3 03/31/2023
E90	03/31/2023	001-G	51040 - E. coli	1	0		C3	2,419.6	397%	<=487		
E90	03/31/2023	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	35.6 %	84%	>=65 %		
E90	02/28/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	84 lb/d	95%	<=43 lb/d	T 02/28/2023	3 02/28/2023
E90	02/28/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 WKLY AVG	112.8 lb/d	98%	<=57 lb/d		
E90	02/28/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	76.3 mg/l	154%	<=30 mg/l	T 02/28/2023	3 02/28/2023
E90	02/28/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	86.3 mg/l	116%	<=40 mg/l		
E90	02/28/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	86.3 mg/l	92%	<=45 mg/l		
E90	02/28/2023	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 DAILY MX	112.8 lb/d	76%	<=64 lb/d	R 02/28/2023	3 02/28/2023
E90	02/28/2023	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	23.6 %	118%	>=65 %		
E90	01/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	90.1 lb/d	110%	<=43 lb/d	T 01/31/2023	3 01/31/2023
E90	01/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 WKLY AVG	119.2 lb/d	109%	<=57 lb/d		
E90	01/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	75.5 mg/l	152%	<=30 mg/l	T 01/31/2023	3 01/31/2023

E90	01/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	94.6 mg/l	137%	<=40 mg/l		
E90	01/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	94.6 mg/l	110%	<=45 mg/l		
E90	01/31/2023	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 DAILY MX	119.2 lb/d	86%	<=64 lb/d	R 01/31/2023	3 01/31/2023
E90	01/31/2023	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	41.9 %	66%	>=65 %		
E90	12/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	230.5 lb/d	436%	<=43 lb/d	T 12/31/2022	3 12/31/2022
E90	12/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 WKLY AVG	492.6 lb/d	764%	<=57 lb/d		
E90	12/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	69.3 mg/l	131%	<=30 mg/l	T 12/31/2022	3 12/31/2022
E90	12/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	91.5 mg/l	129%	<=40 mg/l		
E90	12/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	91.5 mg/l	103%	<=45 mg/l		
E90	12/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 DAILY MX	492.6 lb/d	670%	<=64 lb/d	R 12/31/2022	3 12/31/2022
E90	12/31/2022	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	42.6 %	64%	>=65 %		
E90	11/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	56.3 lb/d	31%	<=43 lb/d	V 11/30/2022	3 11/30/2022
E90	11/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	76.9 mg/l	156%	<=30 mg/l	T 11/30/2022	3 11/30/2022
E90	11/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	90.5 mg/l	126%	<=40 mg/l		
E90	11/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	90.5 mg/l	101%	<=45 mg/l		
E90	11/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 DAILY MX	84 lb/d	31%	<=64 lb/d	U 11/30/2022	3 11/30/2022
E90	11/30/2022	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	48.7 %	47%	>=65 %		
E90	10/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	156.2 lb/d	263%	<=43 lb/d	T 10/31/2022	3 10/31/2022
E90	10/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 WKLY AVG	399.3 lb/d	601%	<=57 lb/d		
E90	10/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	73.1 mg/l	144%	<=30 mg/l	T 10/31/2022	3 10/31/2022
E90	10/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	85.2 mg/l	113%	<=40 mg/l		

E90	10/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	85.2 mg/l	89%	<=45 mg/l			
E90	10/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 DAILY MX	399.3 lb/d	524%	<=64 lb/d	R 10/31/2022	3 10/31/2022	
E90	10/31/2022	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	47.5 %	50%	>=65 %			
E90	09/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	51.1 mg/l	70%	<=30 mg/l	T 09/30/2022	8 09/30/2022	
E90	09/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	61.9 mg/l	55%	<=40 mg/l			
E90	09/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	61.9 mg/l	38%	<=45 mg/l			
E90	09/30/2022	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	62.4 %	7%	>=65 %			
E90	08/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	46.7 lb/d	9%	<=43 lb/d	V 08/31/2022	8 08/31/2022	
E90	08/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 DAILY MX	146 lb/d	128%	<=64 lb/d			
E90	08/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	49.4 mg/l	65%	<=30 mg/l	T 08/31/2022	8 08/31/2022	
E90	08/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	84.1 mg/l	110%	<=40 mg/l			
E90	08/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	84.1 mg/l	87%	<=45 mg/l			
E90	08/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 WKLY AVG	146 lb/d	156%	<=57 lb/d	R 10/31/2022	3 10/31/2022	
E90	08/31/2022	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	55.8 %	26%	>=65 %			
E90	07/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	53.2 mg/l	77%	<=30 mg/l	T 07/31/2022	8 07/31/2022	
E90	07/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	66.2 mg/l	66%	<=40 mg/l			
E90	07/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	66.2 mg/l	47%	<=45 mg/l			
E90	07/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 WKLY AVG	57.4 lb/d	1%	<=57 lb/d	U 10/31/2022	3 10/31/2022	
E90	07/31/2022	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	51.6 %	38%	>=65 %			
E90	06/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	61.7 mg/l	106%	<=30 mg/l	T 06/30/2022	8 06/30/2022	

E90	06/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	93.6 mg/l	134%	<=40 mg/l		
E90	06/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	93.6 mg/l	108%	<=45 mg/l		
E90	06/30/2022	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	50.8 %	41%	>=65 %		
E90	05/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	43.3 mg/l	44%	<=30 mg/l	T 05/31/2022	8 05/31/2022
E90	05/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	55.7 mg/l	39%	<=40 mg/l		
E90	05/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	55.7 mg/l	24%	<=45 mg/l		
E90	04/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	31.4 mg/l	5%	<=30 mg/l	V 04/30/2022	3 04/30/2022
E90	04/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	63.2 mg/l	58%	<=40 mg/l		
E90	04/30/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	63.2 mg/l	40%	<=45 mg/l		
E90	04/30/2022	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	59.2 %	17%	>=65 %		
E90	03/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 DAILY MX	71.9 lb/d	12%	<=64 lb/d		
E90	03/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	40.4 mg/l	35%	<=30 mg/l	V 03/31/2022	3 03/31/2022
E90	03/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	56.5 mg/l	41%	<=40 mg/l		
E90	03/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	61.5 mg/l	37%	<=45 mg/l		
E90	03/31/2022	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	49.7 %	44%	>=65 %		
E90	02/28/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	64.2 lb/d	49%	<=43 lb/d	T 02/28/2022	3 02/28/2022
E90	02/28/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 DAILY MX	200.9 lb/d	214%	<=64 lb/d		
E90	02/28/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	40.9 mg/l	2%	<=40 mg/l		
E90	02/28/2022	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 WKLY AVG	200.9 lb/d	252%	<=57 lb/d	R 02/28/2022	2 04/30/2022
E90	01/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 DAILY MX	65 lb/d	2%	<=64 lb/d		
E90	01/31/2022	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 WKLY AVG	67.8 lb/d	19%	<=57 lb/d	U 01/31/2022	2 04/30/2022

E90	12/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 DAILY MX	67.8 lb/d	6%	<=64 lb/d		
E90	12/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	45.1 mg/l	50%	<=30 mg/l	T 12/31/2021	3 12/31/2021
E90	12/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	58.4 mg/l	46%	<=40 mg/l		
E90	12/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	58.4 mg/l	30%	<=45 mg/l		
E90	12/31/2021	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	63.4 %	5%	>=65 %		
E90	10/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	47.4 lb/d	10%	<=43 lb/d	V 10/31/2021	3 11/15/2021
E90	10/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 DAILY MX	105.5 lb/d	65%	<=64 lb/d		
E90	10/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	51.3 mg/l	71%	<=30 mg/l	T 10/31/2021	3 11/15/2021
E90	10/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	102 mg/l	155%	<=40 mg/l		
E90	10/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	102 mg/l	127%	<=45 mg/l		
E90	10/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	E G	0	1	Q2 WKLY AVG	105.5 lb/d	85%	<=57 lb/d	R 10/31/2021	2 04/30/2022
E90	10/31/2021	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	15.6 %	141%	>=65 %		
E90	09/30/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	34.4 mg/l	15%	<=30 mg/l	V 09/30/2021	3 11/15/2021
E90	09/30/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	102 mg/l	127%	<=45 mg/l		
E90	09/30/2021	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	35.8 %	83%	>=65 %		
E90	08/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 DAILY MX	91.8 lb/d	43%	<=64 lb/d		
E90	08/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	41.5 mg/l	38%	<=30 mg/l	V 08/31/2021	3 11/15/2021
E90	08/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	65.9 mg/l	65%	<=40 mg/l		
E90	08/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	65.9 mg/l	46%	<=45 mg/l		
E90	08/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	E G	0	1	Q2 WKLY AVG	91.8 lb/d	61%	<=57 lb/d	R 08/31/2021	2 04/30/2022

E90	08/31/2021	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	27.8 %	106%	>=65 %			
E90	07/31/2021	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	62.7 %	7%	>=65 %			
E90	06/30/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	47.3 mg/l	58%	<=30 mg/l	T 06/30/2021	3 11/15/2021	
E90	06/30/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	66.5 mg/l	66%	<=40 mg/l			
E90	06/30/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	66.5 mg/l	48%	<=45 mg/l			
E90	06/30/2021	001-G	00310 - BOD, 5-day, 20 deg. C	E G	0	1	Q2 WKLY AVG	61.3 lb/d	8%	<=57 lb/d	U 06/30/2021	2 04/30/2022	
E90	06/30/2021	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	37 %	80%	>=65 %			
E90	05/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	50.4 mg/l	68%	<=30 mg/l	T 05/31/2021	3 11/15/2021	
E90	05/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	73.9 mg/l	85%	<=40 mg/l			
E90	05/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	73.9 mg/l	64%	<=45 mg/l			
E90	05/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	E G	0	1	Q2 WKLY AVG	73.9 lb/d	30%	<=57 lb/d	U 05/31/2021	2 04/30/2022	
E90	05/31/2021	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	48.7 %	47%	>=65 %			
E90	04/30/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	715.9 lb/d	1,565%	<=43 lb/d	T 04/30/2021	3 11/15/2021	
E90	04/30/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 DAILY MX	3,461.9 lb/d	5,309%	<=64 lb/d			
E90	04/30/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	48.4 mg/l	61%	<=30 mg/l	T 04/30/2021	3 11/15/2021	
E90	04/30/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	72.8 mg/l	82%	<=40 mg/l			
E90	04/30/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	72.8 mg/l	62%	<=45 mg/l			
E90	04/30/2021	001-G	00310 - BOD, 5-day, 20 deg. C	E G	0	1	Q2 WKLY AVG	3,461.9 lb/d	5,974%	<=57 lb/d	R 04/30/2021	2 04/30/2022	
E90	04/30/2021	001-G	00530 - Solids, total suspended	1	0	1	Q1 MO AVG	158.2 lb/d	11%	<=142 lb/d			
E90	04/30/2021	001-G	00530 - Solids, total suspended	1	0	1	Q2 WKLY AVG	713.3 lb/d	357%	<=156 lb/d			

E90	04/30/2021	001-G	00530 - Solids, total suspended	EG	0	1	Q2 DAILY MX	713.3 lb/d	320%	<=170 lb/d			
E90	04/30/2021	001-G	51040 - E. coli	1	0		C3	870.4	79%	<=487			
E90	04/30/2021	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	< %	99,999%	>=65 %			
E90	03/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	122.4 lb/d	185%	<=43 lb/d	T 03/31/2021	3 11/15/2021	
E90	03/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 DAILY MX	301.1 lb/d	370%	<=64 lb/d			
E90	03/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	74.3 mg/l	148%	<=30 mg/l	T 03/31/2021	3 11/15/2021	
E90	03/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	92.3 mg/l	131%	<=40 mg/l			
E90	03/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	92.3 mg/l	105%	<=45 mg/l			
E90	03/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 WKLY AVG	301.1 lb/d	428%	<=57 lb/d	R 04/30/2021	2 04/30/2022	
E90	03/31/2021	001-G	51040 - E. coli	1	0		C3	2,419.6	397%	<=487			
E90	03/31/2021	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	< %	99,999%	>=65 %			
E90	02/28/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	60.9 mg/l	103%	<=30 mg/l	T 03/31/2021	3 11/15/2021	
E90	02/28/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	82 mg/l	105%	<=40 mg/l			
E90	02/28/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	82 mg/l	82%	<=45 mg/l			
E90	02/28/2021	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	57.5 %	21%	>=65 %			
E90	01/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	41.6 mg/l	39%	<=30 mg/l	V 03/31/2021	3 11/15/2021	
E90	01/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C2 WKLY AVG	52.7 mg/l	32%	<=40 mg/l			
E90	01/31/2021	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	52.7 mg/l	17%	<=45 mg/l			
E90	07/31/2020	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	63.6 %	4%	>=65 %			
E90	06/30/2020	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	32.7 mg/l	9%	<=30 mg/l	V 06/30/2020	2 08/31/2020	
E90	06/30/2020	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	62.05 mg/l	38%	<=45 mg/l			

E90	05/31/2020	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	55.02 mg/l	22%	<=45 mg/l			
E90	04/30/2020	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	68.68 lb/d	60%	<=43 lb/d	T 04/30/2020	2 08/31/2020	
E90	04/30/2020	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 DAILY MX	205.17 lb/d	221%	<=64 lb/d			
E90	04/30/2020	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	31.46 mg/l	5%	<=30 mg/l	V 04/30/2020	2 08/31/2020	
E90	04/30/2020	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 WKLY AVG	68.68 lb/d	20%	<=57 lb/d			
E90	04/30/2020	001-G	00545 - Solids, settleable	1	0	1	C3 DAILY MX	4 ml/l	300%	<=1 ml/l			
E90	03/31/2020	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	31.13 mg/l	4%	<=30 mg/l	V 04/30/2020	2 08/31/2020	
E90	02/29/2020	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q1 MO AVG	110 lb/d	156%	<=43 lb/d	T 04/30/2020	2 08/31/2020	
E90	02/29/2020	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	Q2 DAILY MX	195 lb/d	205%	<=64 lb/d			
E90	02/29/2020	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	38.34 mg/l	28%	<=30 mg/l	V 04/30/2020	2 08/31/2020	
E90	02/29/2020	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C3 DAILY MX	47.76 mg/l	6%	<=45 mg/l			
E90	02/29/2020	001-G	00310 - BOD, 5-day, 20 deg. C	EG	0	1	Q2 WKLY AVG	110 lb/d	93%	<=57 lb/d			
E90	02/29/2020	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	45.1 %	57%	>=65 %			
E90	12/31/2019	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	30.99 mg/l	3%	<=30 mg/l	V 04/30/2020	2 08/31/2020	
E90	09/30/2019	001-G	00310 - BOD, 5-day, 20 deg. C	1	0	1	C1 MO AVG	33.11 mg/l	10%	<=30 mg/l			
E90	09/30/2019	001-G	81010 - BOD, 5-day, percent removal	K	0	1	C1 MO AV MN	49 %	46%	>=65 %			
E90	06/30/2019	001-G	50060 - Chlorine, total residual	1	0	2	C3 DAILY MX	2.2 mg/l	10%	<=2 mg/l			

Schedule Violations

Violation Code	Sch. Event Code	Schedule Date	Actual Date	Report Received Date	EA Identifier	Sch. Num.	Sch. Type	Schedule Event/ Comments	RNC Det. Code/ RNC Det. Date	RNC Res. Code/ RNC Res. Date
C20	90408	12/07/2022	01/06/2023	01/06/2023	TN-WPC21-0129-1	727	A	Compliance Schedule Comment:		
C10	90408	12/07/2022	01/06/2023	01/06/2023	TN-WPC21-0129-1	727	A	Compliance Schedule Comment:		

APPENDIX 3 – WATER QUALITY BASED EFFLUENT CALCULATIONS (OTHER COMPOUNDS)

2019 WQC

WATER QUALITY BASED EFFLUENT CALCULATIONS
OUTFALL 001

FACILITY: Town of Chapel Hill WWTP
PERMIT: TN0064670
DATE: January 25, 2024

Stream (7Q10) [MGD]	Stream (30Q5) [MGD]	Waste Flow [MGD]	Tl. Susp. Solids [mg/l]	Hardness (as CaCO3) [mg/l]	Margin of Safety [%]
90.12	113.06	0.17	10	50	90

	1	2	3	5		6	7		8	9	10	11	12	13	14	15
	Stream Bckgrnd.	Dectection Levels Scan	WQC RDL	Fish/Aqua. Life Water Quality Criteria			Calculated Effluent Concentration			Human Health Water Quality Criteria (30Q5) In-Stream Criteria			Calculated Effluent Concentration			Avg. daily effluent
		MDL	*EPA MDL	Chronic		Acute	Chronic		Acute	Organisms	Water/Org	DWS	Organisms	Water/Org	DWS	
PARAMETER	[µg/l]	[µg/l]	[µg/l]	[µg/l]		[µg/l]	[µg/l]		[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	ug/l
ANTIMONY		3.8	3.0							640.0	5.6	6.0	383662.5	3357.0	3596.8	5.0
ARSENIC		1.0	1.0	150.0		340.0	71700.9		162522.1	10.0	10.0	10.0	5994.7	5994.7	5994.7	1.0
BERYLLIUM		2.0	1.0									4.0			2397.9	1.0
SELENIUM (f)		5.0	2.0	1.5	3.1	20.0	717.0	1481.8	9560.1	4200.0	170.0	50.0	2517785.1	101910.3	29973.6	2.0
THALLIUM		5.0	*							0.47	0.24	2.0	281.8	143.9	1198.9	1.0
ACROLEIN	0.0	50.0	1.0	3.000		3.000	1434.0		1434.0	9.0	6.0		5395.3	3596.8		5.4
ACRYLONITRILE	0.0	50.0	1.0							2.5	0.51		1498.7	305.7		5.4
BENZENE	0.0	1.0	1.0							510.0	22.0	5.0	305731.0	13188.4	2997.4	1.0
BROMOFORM	0.0	1.0	1.0							1400.0	43.0		839261.7	25777.3		1.0
CARBON TETRACHLORIDE	0.0	1.0	1.0							16.0	2.3	5.0	9591.6	1378.8	2997.4	1.0
CHLOROBENZENE	0.0	1.0	*							1600.0	130.0	100.0	959156.2	77931.4	59947.3	1.0
CHLORODIBROMO-METHANE	0.0	1.0	*							130.0	4.0		77931.4	2397.9		1.0
CHLOROETHANE	0.0	1.0	*													5.0
2-CHLORO-ETHYLVINYL ETHER	0.0	1.0	*													50.0
CHLOROFORM	0.0	5.0	0.5							4700.0	57.0		2817521.4	34169.9		14.3
DICHLOROBROMO-METHANE	0.0	1.0	1.0							170.0	5.5		101910.3	3297.1		1.8
1,1-DICHLOROETHANE	0.0	1.0	1.0							NA	NA	NA	NA	NA	NA	1.0
1,2-DICHLOROETHANE	0.0	1.0	1.0							370.0	3.8	5.0	221804.9	2278.0	2997.4	1.0
TRANS 1,2-DICHLORO-ETHYLENE	0.0	1.0	*							10000	140.0	100.0	5994726.5	83926.2	59947.3	1.0
1,1-DICHLOROETHYLENE	0.0	1.0	1.0							7100.0	300.0	7.0	4256255.8	179841.8	4196.3	1.0
1,2-DICHLOROPROPANE	0.0	1.0	*							150.0	5.0	5.0	89920.9	2997.4	2997.4	1.0
1,3-DICHLORO-PROPYLENE	0.0	1.0	1.0							210.0	3.4		125889.3	2038.2		1.0
ETHYLBENZENE	0.0	1.0	1.0							2100	530.0	700.0	1258892.6	317720.5	419630.9	1.0
METHYL BROMIDE	0.0	1.0	*							1500.0	47.0		899209.0	28175.2		5.0
METHYL CHLORIDE	0.0	1.0	1.0													2.5
METHYLENE CHLORIDE	0.0	5.0	1.0							5900.0	46.0	5.0	3536888.6	27575.7	2997.4	5.0
1,1,2,2-TETRACHLORO-ETHANE	0.0	1.0	0.5							40.0	1.7		23978.9	1019.1		1.0
TETRACHLORO-ETHYLENE	0.0	1.0	0.5							33.0	6.9	5.0	19782.6	4136.4	2997.4	1.0
TOLUENE	0.0	1.0	1.0							15000	1300.0	1000.0	8992089.7	779314.4	599472.6	1.0
1,1,1-TRICHLOROETHANE	0.0	1.0	1.0									200.0			11989.45	1.0
1,1,2-TRICHLOROETHANE	0.0	1.0	0.2							160.0	5.9	5.0	959156.6	3536.9	2997.4	1.0
TRICHLORETHYLENE	0.0	1.0	1.0							300.0	25.0	5.0	179841.8	14986.8	2997.4	1.0
VINYL CHLORIDE	0.0	1.0	2.0							24.0	0.25	2.0	14387.3	149.9	1198.9	1.0
P-CHLORO-M-CRESOL	0.0	10.0	*													10.0
2-CHLOROPHENOL	0.0	10.0	*							150.0	81.0		89920.9	48557.3		10.0
2,4-DICHLOROPHENOL	0.0	10.0	*							290.0	77.0		173847.1	46159.4		10.0
2,4-DIMETHYLPHENOL	0.0	10.0	*							850.0	380.0		509551.7	227799.6		10.0
4,6-DINITRO-O-CRESOL	0.0	10.0	24.0							280.0	13.0		167852.3	7793.1		10.0
2,4-DINITROPHENOL	0.0	10.0	42.0							5300.0	69.0		3177205.0	41363.6		10.0
2-NITROPHENOL	0.0	10.0	*													10.0

WATER QUALITY BASED EFFLUENT CALCULATIONS
OUTFALL 001

FACILITY: Town of Chapel Hill WWTP
PERMIT: TN0064670
DATE: January 25, 2024

Stream (7Q10) [MGD]	Stream (30Q5) [MGD]	Waste Flow [MGD]	Tot. Susp Solids [mg/l]	Hardness (as CaCO3) [mg/l]	Margin of Safety [%]
90.12	113.06	0.17	10	50	90

	1	2	3	5	6	7	8	9	10	11	12	13	14	15
	Stream Bckgrnd.	Dectection Levels		Fish/Aqua. Life Water Quality Criteria		Calculated Effluent Concentration		Human Health Water Quality Criteria (30Q5)						Avg. daily effluent
		Scan	WQC RDL					In-Stream Criteria			Calculated Effluent Concentration			
	Conc.	MDL	*EPA MDL	Chronic	Acute	Chronic	Acute	Organisms	Water/Org	DWS	Organisms	Water/Org	DWS	
PARAMETER	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	ug/l
4-NITROPHENOL	0.0	10.0	*											10.0
PENTACHLOROPHENOL	0.0	10.0	5.0	15	19	7170.1	9082.1	30.0	2.7	1.0	17984.2	1618.6	599.5	10.0
PHENOL	0.0	10.0	*					860000	10000.0		5155466475.5	5994726.5		10.0
2,4,6-TRICHLOROPHENOL	0.0	10.0	2.7					24.0	14.0		14387.3	8392.6		10.0
ACENAPHTHENE	0.0	10.0	*					990.0	670.0		593477.9	401646.7		1.0
ACENAPHTHYLENE	0.0	10.0	2.3											1.0
ANTHRACENE	0.0	10.0	0.7					40000	8300.0		23978905.8	4975623.0		1.0
BENZIDINE	0.0	50.0	*					0.0020	0.0009		1.199	0.5		10.0
BENZO(A)ANTHRACENE	0.0	10.0	0.3					0.18	0.038		107.9	22.8		1.0
BENZO(A)PYRENE	0.0	10.0	0.3					0.18	0.038	0.2	107.9	22.8	119.9	1.0
3,4 BENZO-FLUORANTHENE	0.0	10.0	0.3					0.18	0.038		107.9	22.8		1.0
BENZO(GHI)PERYLENE	0.0	10.0	*											1.0
BENZO(K)FLUORANTHENE	0.0	10.0	0.3					0.18	0.038		107.9	22.8		1.0
BIS (2-CHLOROETHOXY) METHANE	0.0	10.0	*											10.0
BIS (2-CHLOROETHYL)-ETHER	0.0	10.0	1.0					5.3	0.30		3177.2	179.8		10.0
BIS (2-CHLOROISO-PROPYL) ETHER	0.0	10.0	*					65000	1400.0		38965722.0	839261.7		10.0
BIS (2-ETHYLHEXYL) PHTHALATE	0.0	10.0	2.5					22.0	12.0	6.0	13188.4	7193.7	3596.8	3.0
4-BROMOPHENYL PHENYL ETHER	0.0	10.0	*											10.0
BUTYL BENZYL PHTHALATE	0.0	10.0	*					1900.0	1500.0		1138998.0	899209.0		3.0
2-CHLORONAPHTHALENE	0.0	10.0	*					1600.0	1000.0		959156.2	599472.6		1.0
4-CHLORPHENYL PHENYL ETHER	0.0	10.0	*											10.0
CHRYSENE	0.0	10.0	2.5					0.18	0.038		107.9	22.8		1.0
DI-N-BUTYL PHTHALATE	0.0	10.0	2.5					4500.0	2000.0		2697626.9	1198945.3		3.0
DI-N-OCTYL PHTHALATE	0.0	10.0	*											3.0
DIBENZO(A,H) ANTHRACENE	0.0	10.0	*					0.18	0.038		107.9	22.8		1.0
1,2-DICHLOROBENZENE	0.0	1.0	2.0					1300.0	420.0		779314.4	251778.5		1.0
1,3-DICHLOROBENZENE	0.0	5.0	2.0					960.0	320.0		575493.7	191831.2		1.0
1,4-DICHLOROBENZENE	0.0	5.0	2.0					190.0	63.0		113899.8	37766.8		1.0
3,3-DICHLOROBENZIDINE	0.0	10.0	*					0.28	0.2		167.9	125.9		10.0
DIETHYL PHTHALATE	0.0	10.0	1.9					44000	17000.0		26376796.4	10191035.0		3.0
DIMETHYL PHTHALATE	0.0	10.0	1.6					1100000	270000.0		659419910.5	161857614.4		3.0
Di-n-butyl phthalate (84-74-2) (g)	0.0	10.0						4500	2000.0		2697626.9	1198945.3		
2,4-DINITROTOLUENE	0.0	10.0	1.0					34.0	1.1		20382.1	659.4		10.0
2,6-DINITROTOLUENE	0.0	10.0	*											10.0
Di-n-octyl phthalate (117-84-0) (g)	0.0	10.0												
1,2 DIPHENYLHYDRAZINE	0.0	10.0	*					2.0	0.4		1198.9	215.8		10.0
FLUORANTHENE	0.0	10.0	2.2					140.0	130.0		83926.2	77931.4		1.0
FLUORENE	0.0	10.0	0.3					5300.0	1100.0		3177205.0	659419.9		1.0
HEXACHLOROBENZENE	0.0	10.0	1.9					0.0029	0.0028	1.0	1.738	1.7	599.5	1.0
HEXACHLOROBUTADIENE	0.0	10.0	5.0					180.0	4.4		107905.1	2637.7		10.0
HEXACHLOROCYCLO-PENTADIENE	0.0	10.0	*					1100.0	40.0	50.0	659419.9	23978.9	29973.6	10.0
HEXACHLOROETHANE	0.0	10.0	0.5					33.0	14.0		19782.6	8392.6		10.0
INDENO(1,2,3-CD)PYRENE	0.0	10.0	*					0.18	0.038		107.9	22.8		1.0

WATER QUALITY BASED EFFLUENT CALCULATIONS
OUTFALL 001

FACILITY: Town of Chapel Hill WWTP
PERMIT: TN0064670
DATE: January 25, 2024

Stream (7Q10)	Stream (30Q5)	Waste Flow	Tot. Susp. Solids	Hardness (as CaCO3)	Margin of Safety
[MGD]	[MGD]	[MGD]	[mg/l]	[mg/l]	[%]
90.12	113.06	0.17	10	50	90

	1	2	3	5	6	7	8	9	10	11	12	13	14	15
	Stream	Dectection Levels		Fish/Aqua. Life		Calculated Effluent Concentration		Human Health Water Quality Criteria (30Q5)						Avg. daily
	Bckgrnd.	Scan	WQC RDL	Water Quality Criteria				In-Stream Criteria			Calculated Effluent Concentration			effluent
	Conc.	MDL	*EPA MDL	Chronic	Acute	Chronic	Acute	Organisms	Water/Org	DWS	Organisms	Water/Org	DWS	
PARAMETER	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	ug/l
ISOPHORONE	0.0	10.0	*					9600	350.0		5754937.4	209815.4		10.0
NAPHTHALENE	0.0	10.0	*											1.0
NITROBENZENE	0.0	10.0	10.0					690.0	17.0		413636.1	10191.0		10.0
N-NITROSODI-N-PROPYLAMINE	0.0	10.0	*					5.1	0.050		3057.3	30.0		10.0
N-NITROSODI- METHYLAMINE	0.0	10.0	*					30.0	0.0069		17984.2	4.1		10.0
N-NITROSODI-PHENYLAMINE	0.0	10.0	*					60.0	33.0		35968.4	19782.6		10.0
PHENANTHRENE	0.0	10.0	0.7											1.0
PYRENE	0.0	10.0	0.3					4000.0	830.0		2397890.6	497562.3		1.0
1,2,4-TRICHLOROBENZENE	0.0		*					70.0	35.0	70.0	41963.1	20981.5	41963.1	10.0

a. Columns 7-8, and 12-14 are the effluent concentrations allowable to prevent exceedence of water quality criteria.
b. Potential to exceed criteria exists if the measured quantity in column 15 exceeds, or could exceed, the calculated allowable concentrations in columns 7-8, and 12-14.
c. Additional testing is required if the detection level used in the scan is higher than the state RDL and/or the MDL of the approved EPA scan method and industry is known to have that pollutant.
d. All background concentrations for these volatile organic, acid-extractable, and base-neutral compounds are assumed zero in the absence of supporting monitoring data.
e. Other metals for which data were provided on the application are evaluated on the Metals & Toxics spreadsheet.
f. The Water Quality Criteria CCC Value for Selenium is 1.5 µg/l (lentic - Still water aquatic ecosystems such as ponds, lakes, or reservoirs) and 3.1 µg/l (lotic - Flowing water aquatic ecosystems such as streams and rivers).
g. Form 2C only

Revions Date — Revision Description

- September 30, 2019 Updated Acrolein F&A for 2019 WQS update
- September 30, 2019 Updated Selenium for F&A, W&OO and WO for 2019WQS update
- September 30, 2019 ACROLEIN W&OO and WO
- September 30, 2019 1,1-DICHLOROETHYLENE W&OO and WO
- September 30, 2019 PHENOL W&OO and WO
- September 30, 2019 Di-n-butyl phthalate (84-74-2) (added, W&OO and WO for 2019WQS update)
- September 30, 2019 1,1-DICHLOROETHYLENE 2019 WQS update
- September 30, 2019 CHLOROBENZENE DWS for 2019 WQS update

APPENDIX 4 – RECEIVING STREAM LOW FLOW DETERMINATION

FACILITY DISCHARGES AND RECEIVING WATERS

OUTFALL 001	
LONGITUDE	LATITUDE
-86-42-21	35-35-42

FLOW (MGD)	DISCHARGE SOURCE
0.1700	Municipal wastewater
0.1700	TOTAL DISCHARGE

RECEIVING STREAM DISCHARGE ROUTE			
Duck River at mile 185.5			
STREAM LOW FLOW (CFS) *	7Q10	1Q10	30Q5
		139.44	174.94
(MGD)		90.12	113.06

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH & AQUATIC LIFE	RECREATION	IRRIGATION	LIVESTOCK & WILDLIFE	DOMESTIC WATER SUPPLY
X	X	X	X	X
INDUSTRIAL	NAVIGATION			
X				

Treatment: Aerated lagoon, two cells in series w/ sodium hypochlorite chlorination prior to discharge at Outfall 001

* Reference: USGS Hydrologic Toolbox using Station 03599240

FACILITY DISCHARGES AND RECEIVING WATERS

OUTFALL 001	
LONGITUDE	LATITUDE
-86-42-21	35-35-42

FLOW (MGD)	DISCHARGE SOURCE
0.3300	Municipal wastewater
0.3300	TOTAL DISCHARGE

RECEIVING STREAM DISCHARGE ROUTE			
Duck River at mile 185.5			
STREAM LOW FLOW (CFS) *	7Q10	1Q10	30Q5
		139.44	174.94
(MGD)		90.12	113.06

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH & AQUATIC LIFE	RECREATION	IRRIGATION	LIVESTOCK & WILDLIFE	DOMESTIC WATER SUPPLY
X	X	X	X	X
INDUSTRIAL	NAVIGATION			
X				

Treatment: Sequencing Batch Reactor prior to discharge at Outfall 001

* Reference: USGS Hydrologic Toolbox using Station 03599240

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Program SWStat          U.S. GEOLOGICAL SURVEY              Seq 00001
Ver. 5.0       Log-Pearson & Pearson Type III Statistics    Run Date / Time
03/13/2018             based on USGS Program A193           1/18/2024 2:49 PM

 Notice -- Log-Pearson Type III or Pearson Type III distributions are used
           for these computations. Users are responsible for assessment
           and interpretation.


       Description:  03599240 DUCK RIVER ABOVE MILLTOWN, TN
    Year Boundaries:  April  1 - March 31
   Period in report:  April  1, 2004 - March 31, 2023
          Parameter:  1-day low
    Non-zero values:    19
        Zero values:     0
    Negative values:     0  (ignored)

Input time series (zero and negative values not included in listing.)

   194.000   176.000   163.000   139.000   163.000   169.000   153.000   162.000
   134.000   167.000   165.000   162.000   126.000   258.000   160.000   172.000
   198.000   200.000   165.000


  LOG PEARSON TYPE III Frequency Curve Parameters
  (based on logs of the non-zero values)

  Mean (logs)                                 2.225
  Variance (logs)                             0.005
  Standard Deviation (logs)                   0.069
  Skewness (logs)                             0.797
  Standard Error of Skewness (logs)           0.524
  Serial Correlation Coefficient (logs)      -0.173
  Coefficient of Variation (logs)             0.031


Frequency Curve - Parameter values at selected probabilities

   Non-                                  Variance    95-Pct Confidence
 exceedance     Recurrence  Parameter       of           Intervals
 Probability     Interval     Value     Estimate    Lower       Upper
 -----------    ----------  ---------   --------  ---------  ---------
      0.1000         10.00     139.440      1.003    126.460    148.570
      0.2000          5.00     146.450      1.010    136.300    157.650


Program SWStat          U.S. GEOLOGICAL SURVEY              Seq 00002
Ver. 5.0       Log-Pearson & Pearson Type III Statistics    Run Date / Time
03/13/2018             based on USGS Program A193           1/18/2024 2:49 PM
```

```
 Notice -- Log-Pearson Type III or Pearson Type III distributions are used
           for these computations. Users are responsible for assessment
           and interpretation.


      Description:  03599240 DUCK RIVER ABOVE MILLTOWN, TN
   Year Boundaries:  April  1 - March 31
  Period in report:  April  1, 2004 - March 31, 2023
         Parameter:  7-day low
   Non-zero values:    19
       Zero values:     0
   Negative values:     0  (ignored)

Input time series (zero and negative values not included in listing.)

   214.860   180.140   170.140   154.290   169.570   177.430   159.570   178.710
   143.710   171.140   170.430   184.430   129.290   298.860   180.570   181.140
   206.000   243.710   175.860


  LOG PEARSON TYPE III Frequency Curve Parameters
  (based on logs of the non-zero values)

  Mean (logs)                                2.257
  Variance (logs)                            0.006
  Standard Deviation (logs)                  0.080
  Skewness (logs)                            1.060
  Standard Error of Skewness (logs)          0.524
  Serial Correlation Coefficient (logs)     -0.174
  Coefficient of Variation (logs)            0.035


Frequency Curve - Parameter values at selected probabilities

   Non-                                    Variance    95-Pct Confidence
 exceedance     Recurrence  Parameter        of           Intervals
 Probability     Interval     Value       Estimate    Lower      Upper
 -----------    ----------  ---------    --------  ---------  ---------
      0.1000         10.00     147.040       1.005    132.870    157.190
      0.2000          5.00     154.420       1.017    143.090    167.310


Program SWStat          U.S. GEOLOGICAL SURVEY              Seq 00003
Ver. 5.0       Log-Pearson & Pearson Type III Statistics    Run Date / Time
03/13/2018             based on USGS Program A193           1/18/2024 2:49 PM

 Notice -- Log-Pearson Type III or Pearson Type III distributions are used
           for these computations. Users are responsible for assessment
```

and interpretation.

```
      Description:  03599240 DUCK RIVER ABOVE MILLTOWN, TN
   Year Boundaries:  April  1 - March 31
  Period in report:  April  1, 2004 - March 31, 2023
         Parameter:  30-day low
   Non-zero values:    19
       Zero values:     0
   Negative values:     0  (ignored)

Input time series (zero and negative values not included in listing.)

   299.700   186.330   181.400   179.770   204.670   201.130   172.100   297.600
   161.270   198.870   191.170   224.700   165.570   431.900   208.500   210.070
   259.800   321.900   190.670


  LOG PEARSON TYPE III Frequency Curve Parameters
  (based on logs of the non-zero values)

  Mean (logs)                                2.338
  Variance (logs)                            0.013
  Standard Deviation (logs)                  0.113
  Skewness (logs)                            1.279
  Standard Error of Skewness (logs)          0.524
  Serial Correlation Coefficient (logs)     -0.254
  Coefficient of Variation (logs)            0.048


Frequency Curve - Parameter values at selected probabilities

   Non-                                  Variance    95-Pct Confidence
 exceedance     Recurrence  Parameter       of          Intervals
 Probability     Interval     Value     Estimate    Lower      Upper
 -----------    ----------  ---------   --------  ---------  ---------
      0.1000         10.00     164.780      1.011    144.050    180.180
      0.2000          5.00     174.940      1.041    158.190    194.850
```