pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0083909**
Facility Type	**Non-Municipal**	APS ID	**277964**
Major / Minor	**Minor**	Authorization ID	**1269242**

Applicant and Facility Information

Applicant Name	**Conestoga Wood Specialties Corporation**	Facility Name	**Conestoga Wood Specialties**
Applicant Address	245 Reading Road, PO Box 158	Facility Address	245 Reading Road, PO Box 158
	East Earl, PA 17519-9549		East Earl, PA 17519-9549
Applicant Contact	Richard Baldauf	Facility Contact	Richard Baldauf
Applicant Phone	(717) 445-6701	Facility Phone	(717) 445-6701
Client ID	37225	Site ID	508472
Ch 94 Load Status	Not Overloaded	Municipality	East Earl Township
Connection Status	No Limitations	County	Lancaster
Date Application Received	April 15, 2019	EPA Waived?	Yes
Date Application Accepted	April 17, 2019	If No, Reason	

Purpose of Application: NPDES Renewal.

Summary of Review

Conestoga Wood Specialties Corporation has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The permit was issued on October 20, 2014 and became effective on November 1, 2014. The permit authorized discharge of treated sewage from the existing wastewater treatment plant (WWTP) located in East Earl Township, Lancaster County into Conestoga River. The existing permit expiration date was October 31, 2019, and the permit has been administratively extended since that time. A regional WWTP, the Weaverland Valley Authority (WVA) WWTP will ultimately be constructed, and will be located adjacent to Conestoga Wood Specialties. Once the WWTP is constructed, Conestoga Wood Specialties will discharge directly to WVA and will cease discharge from their onsite WWTP. Supplemental information is located at the end of this fact sheet.

Changes to renewal: No changes were made in the renewal permit.

Sludge use and disposal description and location(s): Offsite location

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		*Benjamin Lockwood* Benjamin R. Lockwood / Environmental Engineering Specialist	February 12, 2021
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Program Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.019
Latitude	40º 8' 24"	Longitude	76º 2' 7"
Quad Name	Terre Hill	Quad Code	1737
Wastewater Description:	Sewage Effluent		

Receiving Waters	Conestoga River (WWF, MF)	Stream Code	07548
NHD Com ID	57462165	RMI	48.7
Drainage Area	43.6 mi^2	Yield (cfs/mi^2)	0.12
Q_{7-10} Flow (cfs)	5.23	Q_{7-10} Basis	USGS Gage # 01576500
Elevation (ft)	367	Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	WWF, MF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Impaired		
Cause(s) of Impairment	Pathogens, Pathogens, Nutrients, Nutrients, Siltation		
Source(s) of Impairment	Agriculture, Urban Runoff/Storm Sewers, Crop Production (Crop Land or Dry Land), Grazing in Riparian or Shoreline Zones, Grazing in Riparian or Shoreline Zones		
TMDL Status	N/A	Name	N/A

Nearest Downstream Public Water Supply Intake	Lancaster City Water Bureau		
PWS Waters	Conestoga River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	26

Changes Since Last Permit Issuance: None

Other Comments: A drainage area of 43.6 mi^2 and a Q_{7-10} flow of 5.23 cubic feet per second (cfs) were determined by establishing a correlation to the yield of USGS Gage Station #01576500 on the Conestoga River. The Q_{7-10} and drainage area at the gage are 38.6 cfs and 324 mi^2, respectively. These values are taken from the USGS document "Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania". The Q_{7-10} runoff rate at the gage station was calculated as follows:

Yield = (38.6 cfs)/ 324 mi^2 = 0.12 cfs/mi^2

The drainage area at the discharge point, taken from USGS PA StreamStats = 43.6 mi^2

The Q_{7-10} at the discharge point = 43.6 mi^2 x 0.12 cfs/mi^2 = 5.23 cfs

Treatment Facility Summary				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Extended Aeration	Sodium Hypochlorite	0.019
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.019	50	Not Overloaded	Sludge Holding	Other WWTP

Changes Since Last Permit Issuance: None

Other Comments: The treatment process is as follows: Comminutor – Bar Screen – 2 Equalization Tanks – 3 Aeration Tanks – Clarifier – Chlorine Contact Tank – Sludge Holding Tank – Outfall 001 to Conestoga River.

Compliance History	
Summary of DMRs:	A summary of the past 12-month DMR effluent data is presented on the next page of this fact sheet
Summary of Inspections:	6/7/2016: A routine inspection was conducted. All units were offline at the time of inspection. The outfall effluent was clear, and the Conestoga River was turbid. All field readings were within permitted limits. No other issues were noted. 1/24/2019: A routine inspection was conducted. An accumulation of grease and solids was covering approximately 60% of EQ#1, and one side was not well aerated. The RAS return line in aeration tank #1 was not functioning. A PVC pipe placed over top of the tanks is currently used as a RAS return, which freezes during cold weather. The clarifier supernatant appeared slightly cloudy, and the skimmer was not functioning at the time of inspection. The operator stated this may be due to freezing temperatures. The clarifier trough contents had a light brown tint. The chlorine contact tank appeared mostly clear. The TRC value read 0.00 mg/l after two samples. Effluent had fine suspended solids with a yellow/brown tint. The lab sample for fecal coliform had a result of 200,000/100 ml, which exceeded the permit IMAX limit of 10,000/100 ml. It was noted that the operator should maintain the clarifier skimmer and RAS line function, and closely monitor TRC levels to prevent future fecal coliform violations. A Notice of Violation (NOV) was issued on 2/11/2019 due to failure to properly operate and maintain all facilities, including pumps and blowers, as well as NPDES permit limit violations from June 2014 through October 2018. 2/24/2020: A routine inspection was conducted. It was noted that the clarifier had 80% coverage of foam, and the skimmer was not functional. The chlorine contact tank had a light brown appearance. No other issues were noted. 6/9/2020: An administrative inspection was conducted. All units were operable and online at the time of inspection. No issues were noted in the inspection report.

Other Comments: There are currently no open violations associated with the permittee or the facility.

Compliance History

DMR Data for Outfall 001 (from January 1, 2020 to December 31, 2020)

Parameter	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20
Flow (MGD) Average Monthly	0.00329	0.00302	0.0043	0.00335	0.00303	0.00238	0.00206	0.00228	0.00491	0.00694	0.00654	0.00991
Flow (MGD) Daily Maximum	0.00863	0.00701	0.01037	0.00661	0.00673	0.00489	0.01134	0.00658	0.01767	0.02706	0.02891	0.02872
pH (S.U.) Minimum	6.02	6.07	7.03	7.21	7.36	6.99	8.13	7.65	7.9	7.25	6.56	6.55
pH (S.U.) Maximum	6.76	7.00	8.25	8.8	8.74	8.45	8.6	8.51	8.21	8.25	7.97	7.58
DO (mg/L) Minimum	6.14	6.54	5.4	5.5	5.4	5.63	6.59	5.7	5.6	5.22	5.15	5.21
TRC (mg/L) Average Monthly	0.32	0.16	0.50	0.50	0.50	0.49	0.32	0.33	0.20	0.29	0.08	0.06
TRC (mg/L) Instantaneous Maximum	1.42	0.64	1.20	1.1	1.22	1.15	0.93	0.8	0.71	1.01	0.39	0.13
CBOD5 (mg/L) Average Monthly	9	14	12	29	21	21	16	15	15	26	31	9
TSS (mg/L) Average Monthly	16	15	7	24	17	17	20	20	7	21	56	24
Fecal Coliform (CFU/100 ml) Geometric Mean	< 8	< 21	< 6	< 131	13	36	4	203	3	< 6	< 4	2
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	66	461	32	2420	41	1300	20	2420	4	33	< 10	6
Nitrate-Nitrite (mg/L) Average Monthly	98	90.47	61.98	73.2	2.4	61.6	52.89	41.2	33	8.94	54	70
Total Nitrogen (mg/L) Average Monthly	107.5	90.47	67.28	73.2	54.4	69.6	54.09	42.9	33	8.94	90	70
Ammonia (mg/L) Average Monthly	11	1.2	7.5	3.2	49	5.2	0.51	0.59	1.2	< 0.1	23	3.8
TKN (mg/L) Average Monthly	9.5	< 0.50	5.3	< 0.5	52	8	1.2	1.7	< 0.5	1.87	36	< 2.5
Total Phosphorus (mg/L) Average Monthly	18	15	13	13	13	20	16.0	11.0	4.2	0.36	16.8	14

Compliance History

Effluent Violations for Outfall 001, from: February 1, 2020 To: December 31, 2020

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
CBOD5	03/31/20	Avg Mo	26	mg/L	25	mg/L
CBOD5	02/29/20	Avg Mo	31	mg/L	25	mg/L
CBOD5	09/30/20	Avg Mo	29	mg/L	25	mg/L
TSS	02/29/20	Avg Mo	56	mg/L	30	mg/L
Fecal Coliform	05/31/20	Geo Mean	203	CFU/100 ml	200	CFU/100 ml
Fecal Coliform	09/30/20	IMAX	2420	CFU/100 ml	1000	CFU/100 ml
Fecal Coliform	05/31/20	IMAX	2420	CFU/100 ml	1000	CFU/100 ml
Fecal Coliform	07/31/20	IMAX	1300	CFU/100 ml	1000	CFU/100 ml

Existing Effluent Limitations and Monitoring Requirements

The table below summarizes the effluent limits and monitoring requirements implemented in the existing NPDES permit.

Outfall 001

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30	XXX	60	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Ammonia	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
TKN	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite

Compliance Sampling Location: Outfall 001

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .019
Latitude 40º 8' 24" **Longitude** 76º 2' 7"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Water Quality-Based Limitations

$CBOD_5$, NH_3-N

Pursuant to 40 CFR § 122.44(d)(1)(i), more stringent requirements should be considered when pollutants are discharged at the levels which have the reasonable potential to cause or contribute to excursions above water quality standards.

WQM 7.0 ver. 1.0b is a water quality model designed to assist DEP in determining appropriate water quality based effluent limits (WQBELs) for carbonaceous biochemical oxygen demand ($CBOD_5$), NH_3-N and dissolved oxygen (D.O.). DEP's Technical Guidance No. 391-2000-007 provides the technical methods contained in WQM 7.0 for determining wasteload allocations and for determining recommended NPDES effluent limits for point source discharges. The model was utilized for this permit renewal, and the model output indicated a $CBOD_5$ average monthly limit of 25 mg/l, an NH_3-N average monthly limit of 25 mg/l, and a D.O. minimum limit of 5.0 mg/l were protective of water quality.

The flow data used to run the model was acquired from USGS PA StreamStats, and is included at the end of this fact sheet. The existing $CBOD_5$ limit is the same as the existing limit, which will remain in the permit. DEP's SOP No. BCW-PMT-033 recommends that for existing dischargers, if WQM modeling results for summer indicates that an average monthly limit of 25 mg/l is acceptable, the application manager will generally establish a year round monitoring requirement for ammonia-nitrogen, at a minimum. This is consistent with the existing monitoring requirement for NH_3-N, which will remain in the permit.

Toxics

Effluent sample results for toxic pollutants reported on the renewal application were entered into DEP's Toxics Management Spreadsheet Ver. 1.1 to develop appropriate permit requirements for toxic pollutants of concern. Based on effluent sample results reported on the application, there are no necessary effluent limits or monitoring required for these parameters based on water quality. Reasonable potential to exceed water quality criteria was not determined, and the discharge concentrations were less than 10% of the calculated WQBELs. A copy of the Spreadsheet is attached.

Additional Considerations

Dissolved Oxygen

A minimum D.O. limit of 5.0 mg/L is a D.O. water quality criterion found in 25 Pa. Code § 93.7(a). This limit is included in the existing NPDES permit based BPJ. It is still recommended to include this limit in the draft permit to ensure that the facility continues to achieve compliance with DEP water quality standards.

Chesapeake Bay Total Maximum Daily Load (TMDL)

DEP developed a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). This strategy can be located in the *Pennsylvania Chesapeake Watershed Implementation Plan* (WIP), dated January 11, 2011. Subsequently, an update to the WIP was published as the Phase 2 WIP. As part of the Phase 2 WIP, a *Phase 2 Watershed Implementation Plan Wastewater Supplement* (Phase 2 Supplement) was developed, providing an update on TMDL implementation for point sources and DEP's current implementation strategy for wastewater. A new update to the WIP was published as the Phase 3 WIP in August 2019. As part of the Phase 3 WIP, a *Phase 3 Watershed Implementation Plan Wastewater Supplement* (Phase 3 Supplement) was developed, and was most recently revised on December 17, 2019, and is the basis for the development of any Chesapeake Bay related permit parameters. Sewage discharges have been prioritized based on their design flow to the Bay. The highest priority (Phases 1, 2, and 3) dischargers will receive annual Cap Loads based on their design flow on August 29, 2005 and concentrations of 6 mg/l TN and 0.8 mg/l TP. These limits may be achieved through a combination of treatment technology, credits, or offsets. For Phase 4 and 5 facilities, Cap Loads are not currently being implemented for renewed or amended permits for facilities that do not increase design flow.

This facility is considered a Phase 5 non-significant discharger with a design flow less than 0.2 MGD but greater than 0.002 MGD. According to DEP's latest-revised Phase 3 Supplement, issuance of permits with monitoring and reporting for TN and TP is recommended for any Phase 5 non-significant sewage facilities. Furthermore, DEP's SOP No. BCW-PMT-033 states that in general, at a minimum, monitoring for TN and TP should be included in new and reissued permits for sewage discharges with design flows > 2,000 gpd. The existing contains TN and TP monitoring, which will remain in the permit.

Fecal Coliform

PA Code § 92a.47.(a)(4) requires a monthly average limit of 200/100 mL as a geometric mean and an instantaneous maximum limit not greater than 1,000/100 mL from May through September for fecal coliform. PA Code § 92a.47.(a)(5) requires a monthly average limit of 2,000/100 mL as a geometric mean and an instantaneous maximum limit not greater than 10,000/100 mL from October through April for fecal coliform. These limits will remain in the permit.

Stormwater

The SIC Codes for this facility are 4225 (general warehousing and storage) and 2434 (wood kitchen cabinets). All raw, intermediate, and final products and materials are stored under a roof; therefore, stormwater outfall sampling requirements do not apply. The identification of the following stormwater outfalls will be done for informational purposes only:

Outfall	Drainage Area (acres)	Name	Latitude	Longitude	Receiving Stream
S02	3.8	Retention Pond (Southeast Corner)	40° 08' 15"	76° 01' 44"	Conestoga River
S03	11	Retention Pond (Southwest Corner)	40° 08' 08"	76° 01' 54"	Conestoga River
S04	0.4	Building Nos. 2 & 3 Roof Drains	40° 08' 19"	76° 01' 46"	Conestoga River
S05	5.1	Retention Pond (Northeast Corner)	40° 08' 23"	76° 01' 48"	Conestoga River
S06	2.5	Retention Pond (Northwest Corner)	40° 08' 17"	76° 02' 00"	Conestoga River

Total Residual Chlorine

The attached computer printout utilizes the equations and calculations as presented in the Department's May 1, 2003 Implementation Guidance for Total Residual Chlorine (TRC) (ID No. 391-2000-015) for developing chlorine limitations. The Guidance references Chapter 92, Section 92.2d (3) which establishes a standard BAT limit of 0.5 mg/l unless a facility-specific BAT has been developed. The attached printout indicates that a water quality limit of 0.5 mg/l would be needed to prevent toxicity concerns. This is consistent with the existing limits; therefore, a TRC limit of 0.5 mg/l monthly average and 1.6 mg/l instantaneous maximum will be included in the permit.

Sampling Frequency & Sample Type

The monitoring requirements were established based on BPJ and/or Table 6-3 of DEP's Technical Guidance No. 362-0400-001.

Flow Monitoring

Flow monitoring is recommended by DEP's technical guidance and is also required by 25 PA Code §§ 92a.61.

Anti-Degradation

The effluent limits for this discharge have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. No High Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

303(d) Listed Streams

The discharge is located on a stream segment that is designated on the 303(d) list as impaired. There is a recreational impairment due to pathogens from agriculture and urban runoff/storm sewers. There is an aquatic life impairment due to nutrients from crop production (crop land or dry land) and grazing in riparian or shoreline zones; and due to siltation from grazing in riparian or shoreline zones.

Class A Wild Trout Fisheries

No Class A Wild Trout Fisheries are impacted by this discharge.

Anti-Backsliding

Pursuant to 40 CFR § 122.44(l)(1), all proposed permit requirements addressed in this fact sheet are at least as stringent as the requirements implemented in the existing NPDES permit unless any exceptions

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

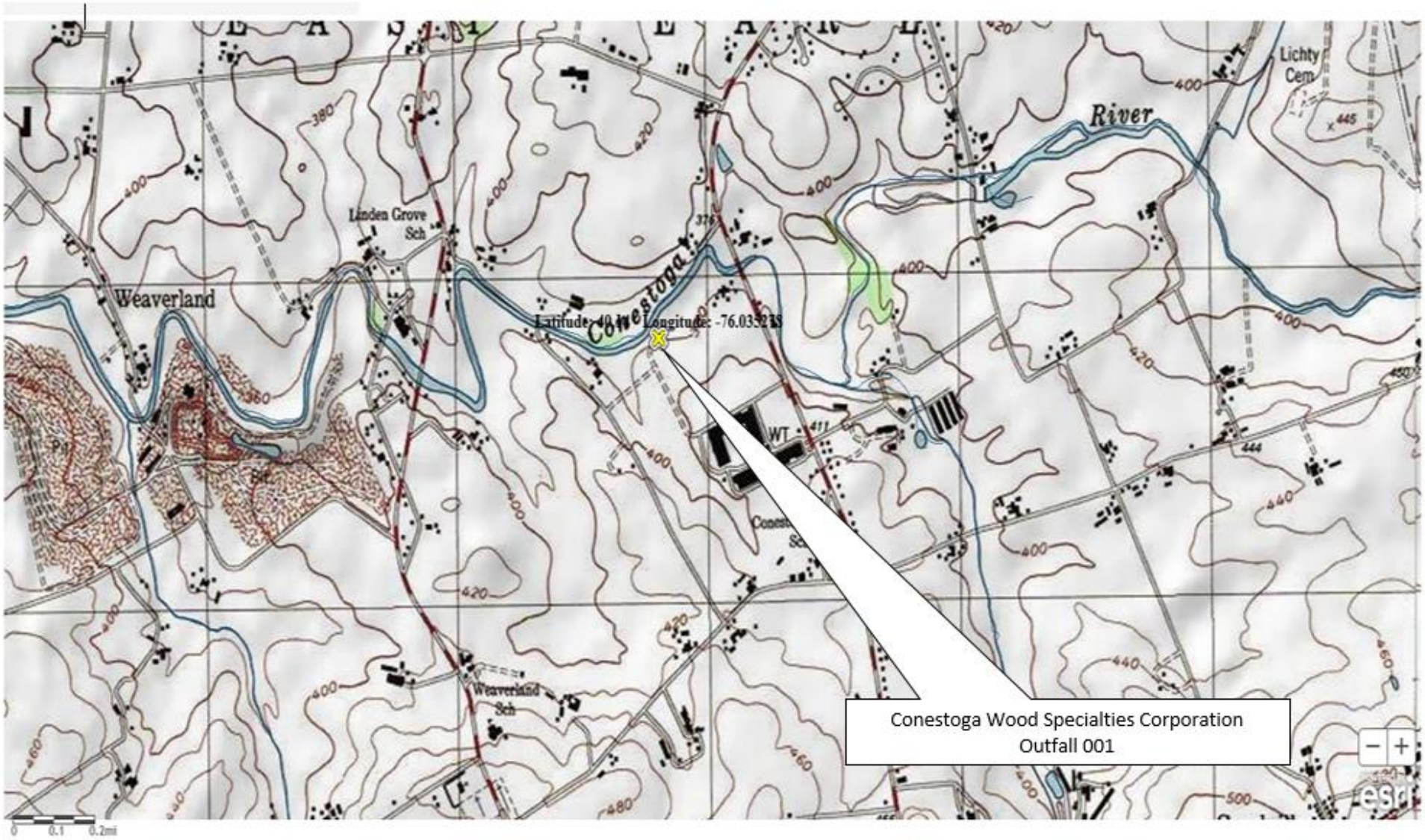
Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30	XXX	60	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Ammonia	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
TKN	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite

Compliance Sampling Location: Outfall 001

Other Comments: None

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP: No. BCW-PMT-002, No. BCW-PMT-033
☐	Other: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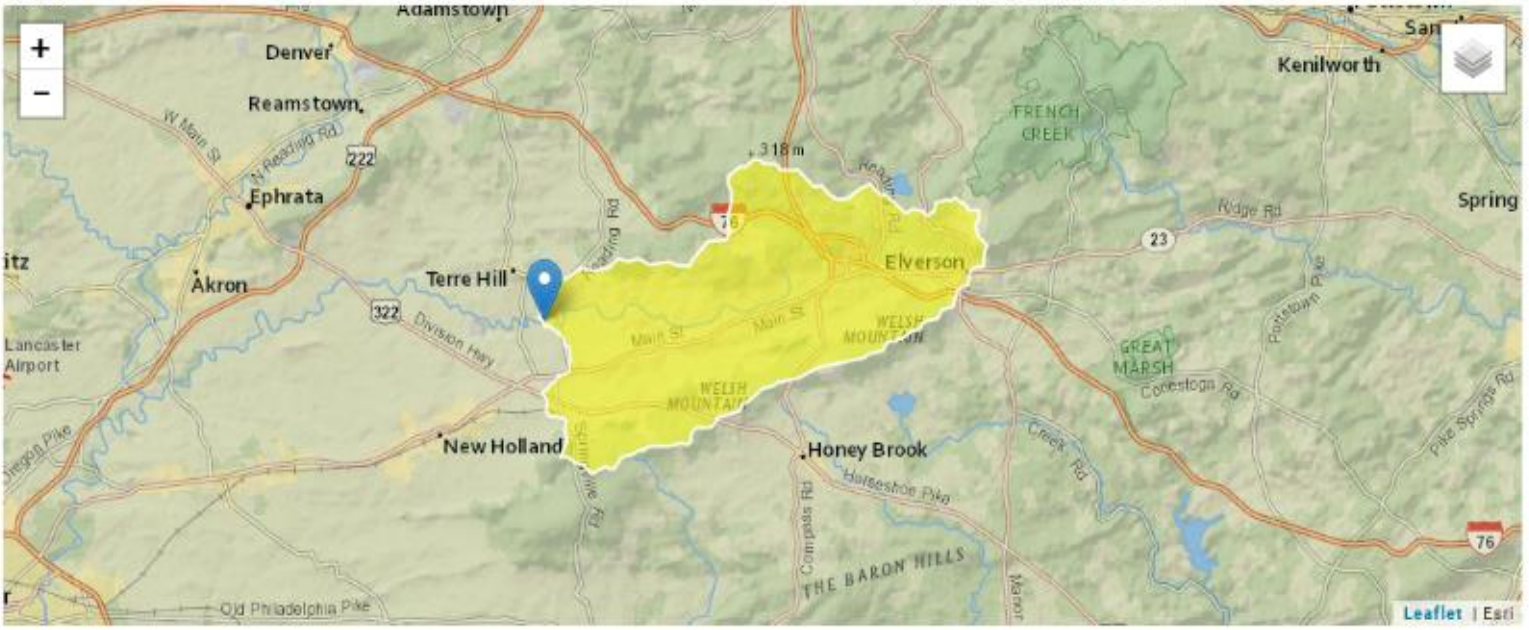
Conestoga Wood Specialties Corporation PA0083909 Outfall 001

Enter comments:

Some comments here

Conestoga Wood Specialties Corporation PA0083909 Outfall 001

Region ID:	PA
Workspace ID:	PA20210212122711275000
Clicked Point (Latitude, Longitude):	40.14020, -76.03582
Time:	2021-02-12 07:27:30 -0500



Permit No. PA0083909

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	43.6	square miles
BSLOPD	Mean basin slope measured in degrees	4.1345	degrees
ROCKDEP	Depth to rock	5.2	feet
URBAN	Percentage of basin with urban development	3.1963	percent

Low-Flow Statistics Parameters[Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	43.6	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	4.1345	degrees	1.7	6.4
ROCKDEP	Depth to Rock	5.2	feet	4.13	5.21
URBAN	Percent Urban	3.1963	percent	0	89

Low-Flow Statistics Flow Report[Low Flow Region 1]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	SEp
7 Day 2 Year Low Flow	11.8	ft^3/s	46	46
30 Day 2 Year Low Flow	14.7	ft^3/s	38	38
7 Day 10 Year Low Flow	6.2	ft^3/s	51	51
30 Day 10 Year Low Flow	7.73	ft^3/s	46	46
90 Day 10 Year Low Flow	11.6	ft^3/s	41	41

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p.

Application Version: 4.4.0

Permit No. PA0083909

Enter report title:

Conestoga Wood Specialties Corporation PA0083909 RMI = 46.7

Enter comments:

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Conestoga Wood Specialties Corporation PA0083909 RMI = 46.7

Region ID:	PA
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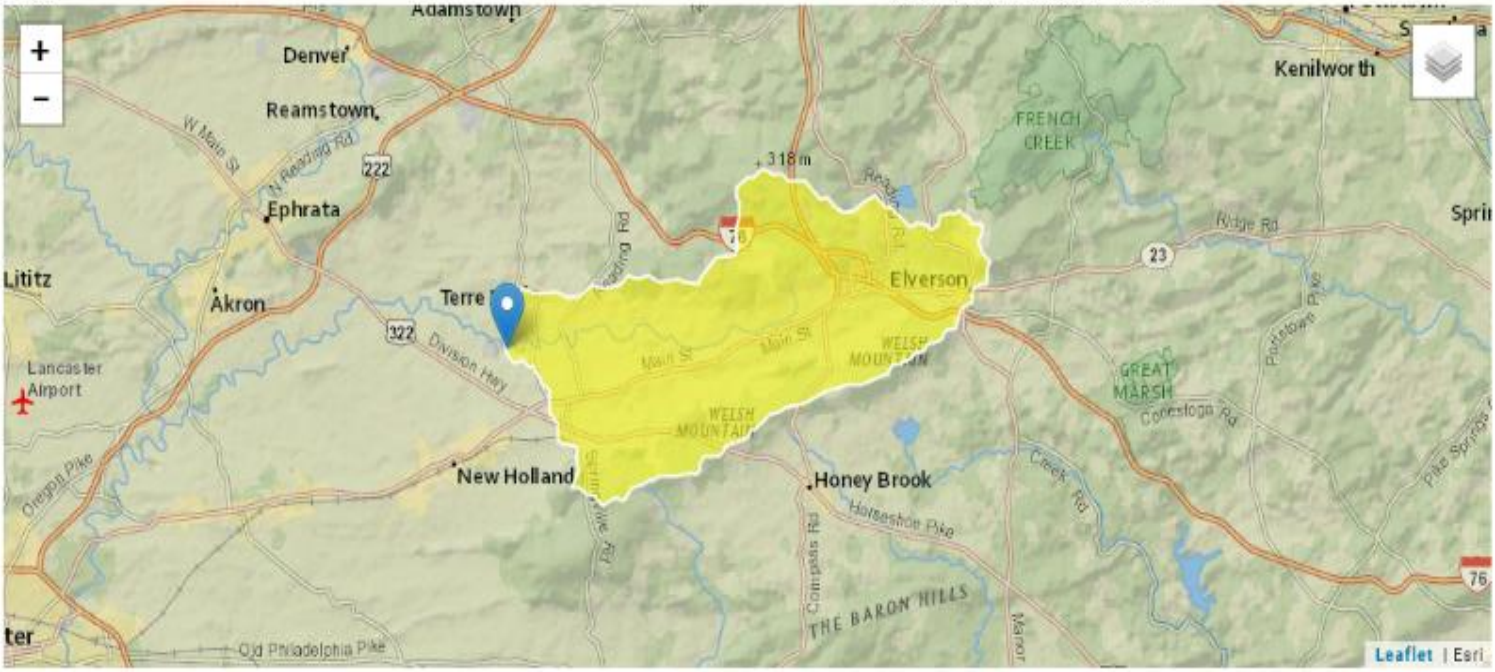

Permit No. PA0083909

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	46.3	square miles
BSLOPD	Mean basin slope measured in degrees	4.0155	degrees
ROCKDEP	Depth to rock	5.2	feet
URBAN	Percentage of basin with urban development	3.3031	percent

Low-Flow Statistics Parameters[Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	46.3	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	4.0155	degrees	1.7	6.4
ROCKDEP	Depth to Rock	5.2	feet	4.13	5.21
URBAN	Percent Urban	3.3031	percent	0	89

Low-Flow Statistics Flow Report[Low Flow Region 1]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	SEp
7 Day 2 Year Low Flow	12.1	ft^3/s	46	46
30 Day 2 Year Low Flow	15.2	ft^3/s	38	38
7 Day 10 Year Low Flow	6.31	ft^3/s	51	51
30 Day 10 Year Low Flow	7.92	ft^3/s	46	46
90 Day 10 Year Low Flow	12	ft^3/s	41	41

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p.

Application Version: 4.4.0

Permit No. PA0083909

	A	B	C	D	E	F	G	H
1	1A	B	C	D	E	F	G	
2	2	**TRC EVALUATION**						
3	3	Input appropriate values in B4:B8 and E4:E7						
4	4	5.23	= Q stream (cfs)		0.5	= CV Daily		
5	5	0.019	= Q discharge (MGD)		0.5	= CV Hourly		
6	6	30	= no. samples		1	= AFC_Partial Mix Factor		
7	7	0.3	= Chlorine Demand of Strea		1	= CFC_Partial Mix Factor		
8	8	0	= Chlorine Demand of Disch		15	= AFC_Criteria Compliance Time (min)		
9	9	0.5	= BAT/BPJ Value		720	= CFC_Criteria Compliance Time (min)		
10		0	= % Factor of Safety (FOS)			=Decay Coefficient (K)		
11	10	Source	Reference	AFC Calculations		Reference	CFC Calculations	
12	11	TRC	1.3.2.iii	WLA afc = 56.780		1.3.2.iii	WLA cfc = 55.348	
13	12	PENTOXSD TRC	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581	
14	13	PENTOXSD TRC	5.1b	LTA_afc= 21.158		5.1d	LTA_cfc = 32.177	
15	14							
16	15	Source		Effluent Limit Calculations				
17	16	PENTOXSD TRC	5.1f	AML MULT = 1.231				
18	17	PENTOXSD TRC	5.1g	AVG MON LIMIT (mg/l) = 0.500		BAT/BPJ		
19	18			INST MAX LIMIT (mg/l) = 1.635				
20								
21								
22								
23		WLA afc	**(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...**					
24			**...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**					
25		LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)					
26		LTA_afc	wla_afc*LTAMULT_afc					
27								
28		**WLA_cfc**	**(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...**					
29			**...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**					
30		LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)					
31		**LTA_cfc**	wla_cfc*LTAMULT_cfc					
32								
33		AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))					
34		AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)					
35		INST MAX LIMIT	**1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)**					
36								

Permit No. PA0083909

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
07J	7548	CONESTOGA RIVER (formerly CREE	48.700	367.00	43.60	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	5.23	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Conestoga Wood	PA0083909	0.0190	0.0190	0.0190	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Permit No. PA0083909

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
07J	7548	CONESTOGA RIVER (formerly CREE	46.700	353.00	46.30	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	6.31	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Permit No. PA0083909

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
07J	7548	CONESTOGA RIVER (formerly CREEK)

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
48.700	5.23	0.00	5.23	.0294	0.00133	.698	36.24	51.88	0.21	0.588	20.03	7.00
Q1-10 Flow												
48.700	3.35	0.00	3.35	.0294	0.00133	NA	NA	NA	0.16	0.754	20.04	7.00
Q30-10 Flow												
48.700	7.11	0.00	7.11	.0294	0.00133	NA	NA	NA	0.25	0.496	20.02	7.00

Permit No. PA0083909

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

Permit No. PA0083909

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
07J	7548	CONESTOGA RIVER (formerly CREEK)

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
48.700	Conestoga Wood	9.64	50	9.64	50	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
48.700	Conestoga Wood	1.91	25	1.91	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
48.70	Conestoga Wood	25	25	25	25	5	5	0	0

Permit No. PA0083909

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
07J	7548	CONESTOGA RIVER (formerly CREEK)

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
48.700	0.019	20.028	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
36.238	0.698	51.880	0.208
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.13	0.067	0.14	0.702
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.225	2.619	Tsivoglou	5
Reach Travel Time (days)			
0.588			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.059	2.12	0.13	8.24
0.118	2.11	0.13	8.24
0.176	2.10	0.12	8.24
0.235	2.10	0.12	8.24
0.294	2.09	0.11	8.24
0.353	2.08	0.11	8.24
0.412	2.07	0.10	8.24
0.471	2.06	0.10	8.24
0.529	2.05	0.10	8.24
0.588	2.05	0.09	8.24

Permit No. PA0083909

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
07J	7548	CONESTOGA RIVER (formerly CREEK)

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
48.700	Conestoga Wood	PA0083909	0.019	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			5

Permit No. PA0083909

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.1, October 2020

Discharge Information

Instructions | Discharge | Stream

Facility: **Conestoga Wood Specialties Corporation** NPDES Permit No.: **PA0083909** Outfall No.: **001**

Evaluation Type: Wastewater Description: **Sewage Effluent**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
0.019	100	7						

	Discharge Pollutant	Units	Max Discharge Conc		0 if left blank: Trib Conc	0 if left blank: Stream Conc	0.5 if left blank: Daily CV	0.5 if left blank: Hourly CV	0 if left blank: Stream CV	0 if left blank: Fate Coeff	0 if left blank: FOS	1 if left blank: Criteria Mod	1 if left blank: Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L											
	Chloride (PWS)	mg/L											
	Bromide	mg/L											
	Sulfate (PWS)	mg/L											
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L											
	Total Antimony	µg/L											
	Total Arsenic	µg/L											
	Total Barium	µg/L											
	Total Beryllium	µg/L											
	Total Boron	µg/L											
	Total Cadmium	µg/L											
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L											
	Total Cobalt	µg/L											
	Total Copper	mg/L		0.01									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L											
	Dissolved Iron	µg/L											
	Total Iron	µg/L											
	Total Lead	mg/L		0.036									
	Total Manganese	µg/L											
	Total Mercury	µg/L											
	Total Nickel	µg/L											
	Total Phenols (Phenolics) (PWS)	µg/L											
	Total Selenium	µg/L											
	Total Silver	µg/L											
	Total Thallium	µg/L											
	Total Zinc	mg/L	<	0.05									
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										

Permit No. PA0083909

Group 3	Carbon Tetrachloride	µg/L	<											
	Chlorobenzene	µg/L												
	Chlorodibromomethane	µg/L	<											
	Chloroethane	µg/L	<											
	2-Chloroethyl Vinyl Ether	µg/L	<											
	Chloroform	µg/L	<											
	Dichlorobromomethane	µg/L	<											
	1,1-Dichloroethane	µg/L	<											
	1,2-Dichloroethane	µg/L	<											
	1,1-Dichloroethylene	µg/L	<											
	1,2-Dichloropropane	µg/L	<											
	1,3-Dichloropropylene	µg/L	<											
	1,4-Dioxane	µg/L	<											
	Ethylbenzene	µg/L	<											
	Methyl Bromide	µg/L	<											
	Methyl Chloride	µg/L	<											
	Methylene Chloride	µg/L	<											
	1,1,2,2-Tetrachloroethane	µg/L	<											
	Tetrachloroethylene	µg/L	<											
	Toluene	µg/L	<											
	1,2-trans-Dichloroethylene	µg/L	<											
	1,1,1-Trichloroethane	µg/L	<											
	1,1,2-Trichloroethane	µg/L	<											
	Trichloroethylene	µg/L	<											
	Vinyl Chloride	µg/L	<											
Group 4	2-Chlorophenol	µg/L	<											
	2,4-Dichlorophenol	µg/L	<											
	2,4-Dimethylphenol	µg/L	<											
	4,6-Dinitro-o-Cresol	µg/L	<											
	2,4-Dinitrophenol	µg/L	<											
	2-Nitrophenol	µg/L	<											
	4-Nitrophenol	µg/L	<											
	p-Chloro-m-Cresol	µg/L	<											
	Pentachlorophenol	µg/L	<											
	Phenol	µg/L	<											
	2,4,6-Trichlorophenol	µg/L	<											
Group 5	Acenaphthene	µg/L	<											
	Acenaphthylene	µg/L	<											
	Anthracene	µg/L	<											
	Benzidine	µg/L	<											
	Benzo(a)Anthracene	µg/L	<											
	Benzo(a)Pyrene	µg/L	<											
	3,4-Benzofluoranthene	µg/L	<											
	Benzo(ghi)Perylene	µg/L	<											
	Benzo(k)Fluoranthene	µg/L	<											
	Bis(2-Chloroethoxy)Methane	µg/L	<											
	Bis(2-Chloroethyl)Ether	µg/L	<											
	Bis(2-Chloroisopropyl)Ether	µg/L	<											
	Bis(2-Ethylhexyl)Phthalate	µg/L	<											
	4-Bromophenyl Phenyl Ether	µg/L	<											
	Butyl Benzyl Phthalate	µg/L	<											
	2-Chloronaphthalene	µg/L	<											
	4-Chlorophenyl Phenyl Ether	µg/L	<											
	Chrysene	µg/L	<											
	Dibenzo(a,h)Anthrancene	µg/L	<											
	1,2-Dichlorobenzene	µg/L	<											
	1,3-Dichlorobenzene	µg/L	<											
	1,4-Dichlorobenzene	µg/L	<											
	3,3-Dichlorobenzidine	µg/L	<											
	Diethyl Phthalate	µg/L	<											
	Dimethyl Phthalate	µg/L	<											
	Di-n-Butyl Phthalate	µg/L	<											
	2,4-Dinitrotoluene	µg/L	<											

Permit No. PA0083909

	2,6-Dinitrotoluene	µg/L	<											
	Di-n-Octyl Phthalate	µg/L	<											
	1,2-Diphenylhydrazine	µg/L	<											
	Fluoranthene	µg/L	<											
	Fluorene	µg/L	<											
	Hexachlorobenzene	µg/L	<											
	Hexachlorobutadiene	µg/L	<											
	Hexachlorocyclopentadiene	µg/L	<											
	Hexachloroethane	µg/L	<											
	Indeno(1,2,3-cd)Pyrene	µg/L	<											
	Isophorone	µg/L	<											
	Naphthalene	µg/L	<											
	Nitrobenzene	µg/L	<											
	n-Nitrosodimethylamine	µg/L	<											
	n-Nitrosodi-n-Propylamine	µg/L	<											
	n-Nitrosodiphenylamine	µg/L	<											
	Phenanthrene	µg/L	<											
	Pyrene	µg/L	<											
	1,2,4-Trichlorobenzene	µg/L	<											
Group 6	Aldrin	µg/L	<											
	alpha-BHC	µg/L	<											
	beta-BHC	µg/L	<											
	gamma-BHC	µg/L	<											
	delta BHC	µg/L	<											
	Chlordane	µg/L	<											
	4,4-DDT	µg/L	<											
	4,4-DDE	µg/L	<											
	4,4-DDD	µg/L	<											
	Dieldrin	µg/L	<											
	alpha-Endosulfan	µg/L	<											
	beta-Endosulfan	µg/L	<											
	Endosulfan Sulfate	µg/L	<											
	Endrin	µg/L	<											
	Endrin Aldehyde	µg/L	<											
	Heptachlor	µg/L	<											
	Heptachlor Epoxide	µg/L	<											
	PCB-1016	µg/L	<											
	PCB-1221	µg/L	<											
	PCB-1232	µg/L	<											
	PCB-1242	µg/L	<											
	PCB-1248	µg/L	<											
	PCB-1254	µg/L	<											
	PCB-1260	µg/L	<											
	PCBs, Total	µg/L	<											
	Toxaphene	µg/L	<											
	2,3,7,8-TCDD	ng/L	<											
Group 7	Gross Alpha	pCi/L												
	Total Beta	pCi/L	<											
	Radium 226/228	pCi/L	<											
	Total Strontium	µg/L	<											
	Total Uranium	µg/L	<											
	Osmotic Pressure	mOs/kg												

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.1, October 2020

Stream / Surface Water Information

Conestoga Wood Specialties Corporation, NPDES Permit No. PA0083909, Outfall 001

Instructions | Discharge | Stream

Receiving Surface Water Name: Conestoga River

No. Reaches to Model: 1

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	007548	48.7	367	43.6			Yes
End of Reach 1	007548	46.7	353	46.3			Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	48.7	0.1	5.23									100	7		
End of Reach 1	46.7	0.1	6.31									100	7		

Q_h

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	48.7														
End of Reach 1	46.7														

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.1, October 2020

Model Results

Conestoga Wood Specialties Corporation, NPDES Permit No. PA0083909, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | (●) All ( ) Inputs ( ) Results ( ) Limits

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.423 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Copper	0	0		0	13.439	14.0	1,068	Chem Translator of 0.96 applied
Total Lead	0	0		0	64.581	81.6	6,230	Chem Translator of 0.791 applied
Total Zinc	0	0		0	117.180	120	9,143	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 83.737 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Copper	0	0		0	8.956	9.33	1,669	Chem Translator of 0.96 applied
Total Lead	0	0		0	2.517	3.18	569	Chem Translator of 0.791 applied
Total Zinc	0	0		0	118.139	120	21,439	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 83.737 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Copper	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): 25.895 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Copper	0	0		0	N/A	N/A	N/A	

Total Lead	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Copper	0.68	mg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	0.57	mg/L	Discharge Conc ≤ 10% WQBEL
Total Zinc	5.86	mg/L	Discharge Conc ≤ 10% WQBEL