pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

8Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Application Type	**DEP-Initiated Major Amendment**	Application No.	**PA0081418 A1**
Facility Type	**Industrial**	APS ID	**604201**
Major / Minor	**Minor**	Authorization ID	**1479900**

Applicant and Facility Information

Applicant Name	**Rutters Dairy Inc.**	Facility Name	**Rutters Dairy**
Applicant Address	2100 N George Street	Facility Address	2100 N George Street
	York, PA 17404-1815		York, PA 17404-1815
Applicant Contact	Todd Rutter	Facility Contact	Todd Rutter
Applicant Phone	(717) 771-5958	Facility Phone	(717) 771-5958
Client ID	37020	Site ID	447504
SIC Code	2026	Municipality	Manchester Township
SIC Description	Manufacturing - Fluid Milk	County	York
Date Application Received	April 10, 2024	EPA Waived?	Yes
Date Application Accepted	April 10, 2024	If No, Reason	

Purpose of Application: This is a request to amend thermal limits.

Approve	Deny	Signatures	Date
X		Nicholas Hong, P.E. / Environmental Engineer Nick Hong (via electronic signature)	May 8, 2024
x		Daniel W. Martin, P.E. / Environmental Engineer Manager Maria D. Bebenek for	May 21, 2024
x		Maria D. Bebenek, P.E. / Environmental Program Manager Maria D. Bebenek	May 21, 2024

Summary of Review

The facility expressed concerns about the temperature limits in the NPDES that became effective on April 1, 2021. Exceedances in the facility's thermal limits precipitated review of the permit limits by the facility and DEP. The facility requested a meeting with DEP.

A site visit was conducted by DEP on January 25, 2024. Rutters Dairy was represented by Brett Garner (Director of Operations), Brett Goodling (Future Director of Operations), and Gary Shaffer (Maintenance Manager) of Rutter's Dairy. DEP was represented by Kristin Bardell, Nick Selvage, Shawn Lesitsky, Adam Nothstein, and Nick Hong. The visit included observation of the spring and the discharge location. A Point of First Use survey was conducted by the water pollution biologists.

This Fact Sheet shows site features, summarizes how the past thermal limits were developed, summarizes why the thermal permit limits needed to be re-evaluated, and summarizes the proposed thermal limits.

1.0 Site Map

The diagram depicts the spring location, the direction of spring flow, the outfall, and the direction of receiving waters.

Plan View Schematic

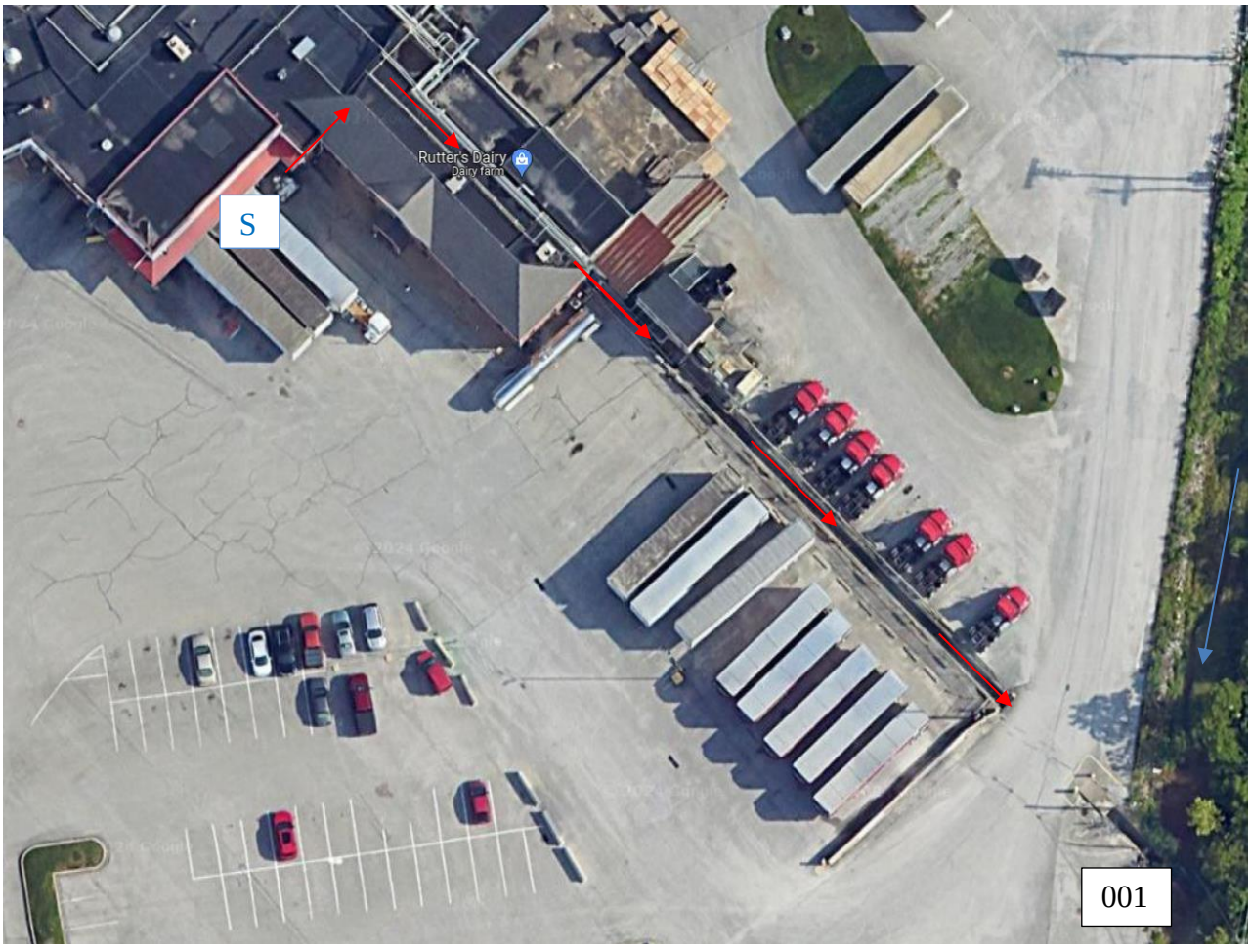
Legend

S: Spring Location

001: Discharge Point

Spring Flow Direction

Receiving Stream Flow Direction



Summary of Review

Spring, Channel, and Outfall Photos

Photo by Shawn Lesitsky on 2/14/2023. Natural spring where non-contact cooling water is drafted from.

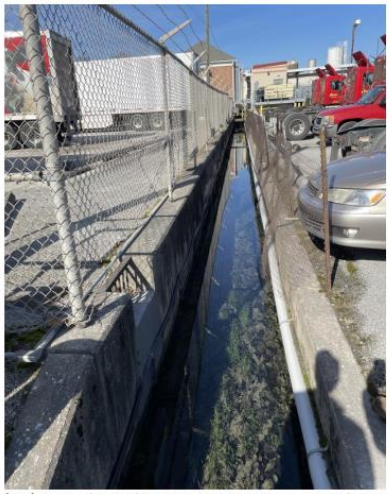


Photo by Shawn Lesitsky on 2/14/2023. Channel containing non-contact cooling water and excess spring water.

Photo by Shawn Lesitsky on 2/14/2023. Outfall 001 discharging non-contact cooling water and spring water into a UNT of Codorus Creek.

Summary of Review

Receiving Waters Information

Utilizing the DEP's web-based Emap-PA information system, the receiving water has been identified as protected water usage for warm water fishes (WWF) and migratory fishes (MF). No Class A Wild Trout fisheries are impacted by this discharge.

2.0 History of Thermal Limits

The NPDES permit (NPDES Permit 2014) that became effective June 1, 2014 and expired on May 31, 2019 required monitoring and compliance with thermal effluent limits. An interim period from June 1, 2014 to May 31, 2015 was provided to allow the facility time to implement the temperature limits. Beginning June 1, 2015, the facility was subject to temperature limits.

The NPDES permit (NPDES Permit 2021) that became effective April 1, 2021 and expires on March 31, 2026 required monitoring and compliance with thermal effluent limits. Thermal limits were modified from the NPDES Permit 2014. Discovery showed that the thermal limits from NPDES Permit 2021 were based upon inaccurate Q710 multipliers.

A summary of DMR data from 2018 to 2023 is shown in the table. Data for the first few months of 2024 was available at the time of this Fact Sheet. The summary table was constructed to observe if historical effluent temperature would exceed the proposed temperature limits. The development of the proposed limits are discussed in Section 4.0 of this Fact Sheet. The table shows that in the months of January 1 to April 15 and November 1 to December 31, the facility would struggle to meet the thermal effluent limits.

Summary of Thermal Data (DMR)

	2018	2019	2020	2021	2022	2023	2024	Proposed Limits	Is 2022 data > Proposed Limits	Is 2023 data > Proposed Limits	Is 2024 data > Proposed Limits
January 1-31	No Sample	57.4	58.9	58.1	60.1	60	56.6	55.8	Yes	Yes	Yes
February 1-29	No Sample	57.4	58.6	58.8	58.9	59.8	56.6	55.9	Yes	Yes	Yes
March 1-31	57.3	57	59.3	57.59	59.6	58.7	56.5	56.5	Yes	Yes	No
April 1-15	57.2	57.2	58.6	58.3	58.4	57.1		57.0	Yes	Yes	
April 16-30	57.3	57.7	58.8	59.1	58.6	55		64.7	No	No	
May 1-15	57.9	57.9	58.3	60.3	58.3	55.5		73.5	No	No	
May 16-31	57.9	57.9	58.3	61.1	58.3	62.6		89.3	No	No	
June 1-15	57.9	58.6	59.6	62.6	59.6	62.7		94.8	No	No	
June 16-30	57.9	58.6	59.6	64.7	60.9	66.2		101.0	No	No	
July 1-31	59.4	60.9	61.3	62.6	64.3	61.1		97.6	No	No	
August 1-15	58.3	64.1	59.2	63.2	64.6	65.2		95.8	No	No	
August 16-30	58.3	64.1	59.2	59.3	67.6	69.7		95.8	No	No	
September 1-15	58.5	68.6	61.5	58.4	66.7	70.7		90.3	No	No	
September 16-30	58.5	68.6	61.5	58.9	66.7	56.5		83.0	No	No	
October 1-15	58.9	65.5	63	59.7	62.1	57.6		76.1	No	No	
October 16-31	58.9	65.5	63	59.9	63.2	65.5		68.7	No	No	
November 1-15	58.4	60.3	61.3	60	64.5	65.3		59.2	Yes	Yes	
November 16-30	57.8	62.4	61.3	60.6	61.6	60.4		55.5	Yes	Yes	
December 1-31	57.7	59.8	59.3	63.2	60.6	57.2		55.7	Yes	Yes	

StreamStats was used to estimate the Q710. The NPDES Permit 2014 and NPDES Permit 2021 were based on a Q710 of 0.18 ft^3/s.

This Fact Sheet again utilized StreamStats to estimate Q710. In May 2024, the Q710 from StreamStats was 0.118 ft^3/s.

Summary of Review

3.0 Justification for Thermal Amendment

The cooling water used by the facility is supplied by a spring (Refer to the Photos). Approximately 0.4 MGD is supplied and discharge by the facility. The facility estimates that approximately 0.2 MGD is used for cooling water and the remaining 0.2 MGD mixes with the cooling water in the channel prior to discharge to the receiving stream.

As described in the Implementation Guidance for Temperature Criteria (Implementation Guidance) (Document # 391-2000-017, rev April 11, 2009), the thermal limits were based upon Case 2 scenario. This scenario is where the cooling water is withdrawn from a source other than the receiving waters.

The facility emphasized that their belief was that the spring water used for their cooling water is warmer than default ambient temperature. The spring has water originating from the ground and can have a water temperature that is above the ambient receiving waters. Thereby, the NPDES permit should reflect that for the thermal limits.

The facility supplied a few data points from January 2024 as basis for their contention. DEP agrees with the facility's contention. The Implementation Guidance includes a provision such that "If the ambient temperature exceeds the target criterion, then the ambient temperature becomes the criterion. And since the permittee is allowed a minimum 1^{o}F instream temperature rise above ambient, the instream temperature can be no less than ambient + 1 ^{0}F" (Implementation Guidance 11).

Understanding the facility's contention, DEP intends on amending the temperature limits in the NPDES via a DEP-Initiated Amendment.

4.0 Proposed Thermal Limits

Utilizing DEP's Thermal Discharge Limit Calculation sheet (Thermal Calculations), DEP was able to model the mixing of the spring cooling water and receiving waters for thermal compliance temperature.

The assumptions made for the model include

Q710 = 0.118 CFS
Spring Water Temperature Influent = 54.2 F
Cooling Water Usage Rate = 0.2 MGD
Spring Water Additions = 0.2 MGD
Total Discharge Flow Rate = 0.4 MGD (Cooling Water Usage Rate + Spring Water Additions)
Complete Mixing of discharge and receiving stream

Notes:

- Q710: 0.118 ft^3/s
- Spring Water Influent Temperature: The model assumed a constant spring water influent temperature of 54.2 F year-round.
- Discharge Flow Rate Assumption: The calculations utilized a fixed cooling water flow rate of 0.4 MGD. A review of DMR beginning on January 1, 2019 and ending March 1, 2024, was conducted to obtain an actual average flow rate. The average flow rate for the DMRs reviewed was 0.18 MGD. The average daily maximum flow rate was 0.23 MGD.
  DEP guidances recommend modeling using the average annual flow rate. To model for worst case scenario, this fact sheet used a fixed cooling water flow rate of 0.2 MGD. With the average flow rate less than the 0.2 MGD, there would be less heated water to be cooled. Thus, the compliance temperatures may be slightly easier to meet with the less heated water flow.
- Fixed Spring Water Addition Assumption: DEP's Thermal Calculations assumes that 100% of the cooling water is mixed with the receiving stream. The actual case at Rutters Dairy is that the cooling water originating from the spring utilizes 0.2 MGD and an additional 0.2 MGD originating from the spring is not used for cooling water but flows to the discharge point. The discharge point has a total discharge of 0.4 MGD. The calculations assume worst case scenario with 0.4 MGD used for cooling water.

DEP Thermal Calculations does not account for the 0.2 MGD which originates from the spring but not used for cooling water. DEP modelled the discharge at 0.40 MGD assuming that the volume of water was used for cooling water. DEP is concerned that modification of the standard spreadsheet in future renewals cycles will cause for confusion and unnecessary compliance enforcement in future renewals. NPDES permits are prepared on five-year intervals.

Summary of Review

The table below summarizes temperature limits for the DEP-initiated amended NPDES permit.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 39º 59' 29.00" , **Longitude** 76º 44' 9.00" , **River Mile Index** 0.92 , **Stream Code** 8055

Receiving Waters: Unnamed Tributary to Codorus Creek (WWF)

Type of Effluent: Noncontact Cooling Water (NCCW)

1. The permittee is authorized to discharge during the period from **April 1, 2021** through **March 31, 2026.**
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

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	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Temperature (deg F) (ºF) Jan 1 - 31	XXX	XXX	XXX	55.8	XXX	XXX	1/day	I-S
Temperature (deg F) (ºF) Feb 1 - 29	XXX	XXX	XXX	55.9	XXX	XXX	1/day	I-S
Temperature (deg F) (ºF) Mar 1 - 31	XXX	XXX	XXX	56.5	XXX	XXX	1/day	I-S
Temperature (deg F) (ºF) Apr 1 - 15	XXX	XXX	XXX	57.0	XXX	XXX	1/day	I-S
Temperature (deg F) (ºF) Apr 16 - 30	XXX	XXX	XXX	64.7	XXX	XXX	1/day	I-S
Temperature (deg F) (ºF) May 1 - 15	XXX	XXX	XXX	73.5	XXX	XXX	1/day	I-S
Temperature (deg F) (ºF) May 16 - 31	XXX	XXX	XXX	89.3	XXX	XXX	1/day	I-S
Temperature (deg F) (ºF) Jun 1 - 15	XXX	XXX	XXX	94.8	XXX	XXX	1/day	I-S

Summary of Review

Outfall 001 , Continued (from 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		
Temperature (deg F) (°F) Jun 16 - 30	XXX	XXX	XXX	101.0	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Jul 1 - 31	XXX	XXX	XXX	97.6	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Aug 1 - 15	XXX	XXX	XXX	95.8	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Aug 16 - 31	XXX	XXX	XXX	95.8	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Sep 1 - 15	XXX	XXX	XXX	90.3	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Sep 16 - 30	XXX	XXX	XXX	83.0	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Oct 1 - 15	XXX	XXX	XXX	76.1	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Oct 16 - 31	XXX	XXX	XXX	68.7	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Nov 1 - 15	XXX	XXX	XXX	59.2	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Nov 16 - 30	XXX	XXX	XXX	55.5	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Dec 1 - 31	XXX	XXX	XXX	55.7	XXX	XXX	1/day	I-S

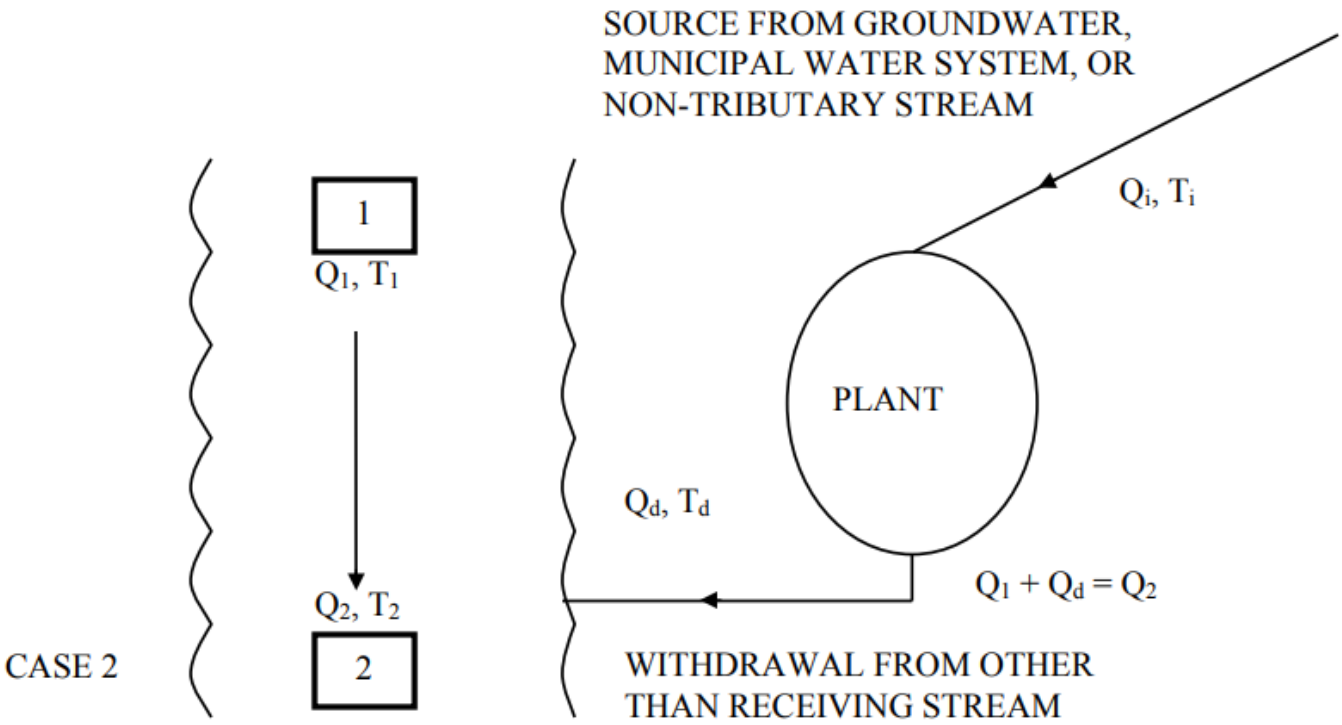
Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

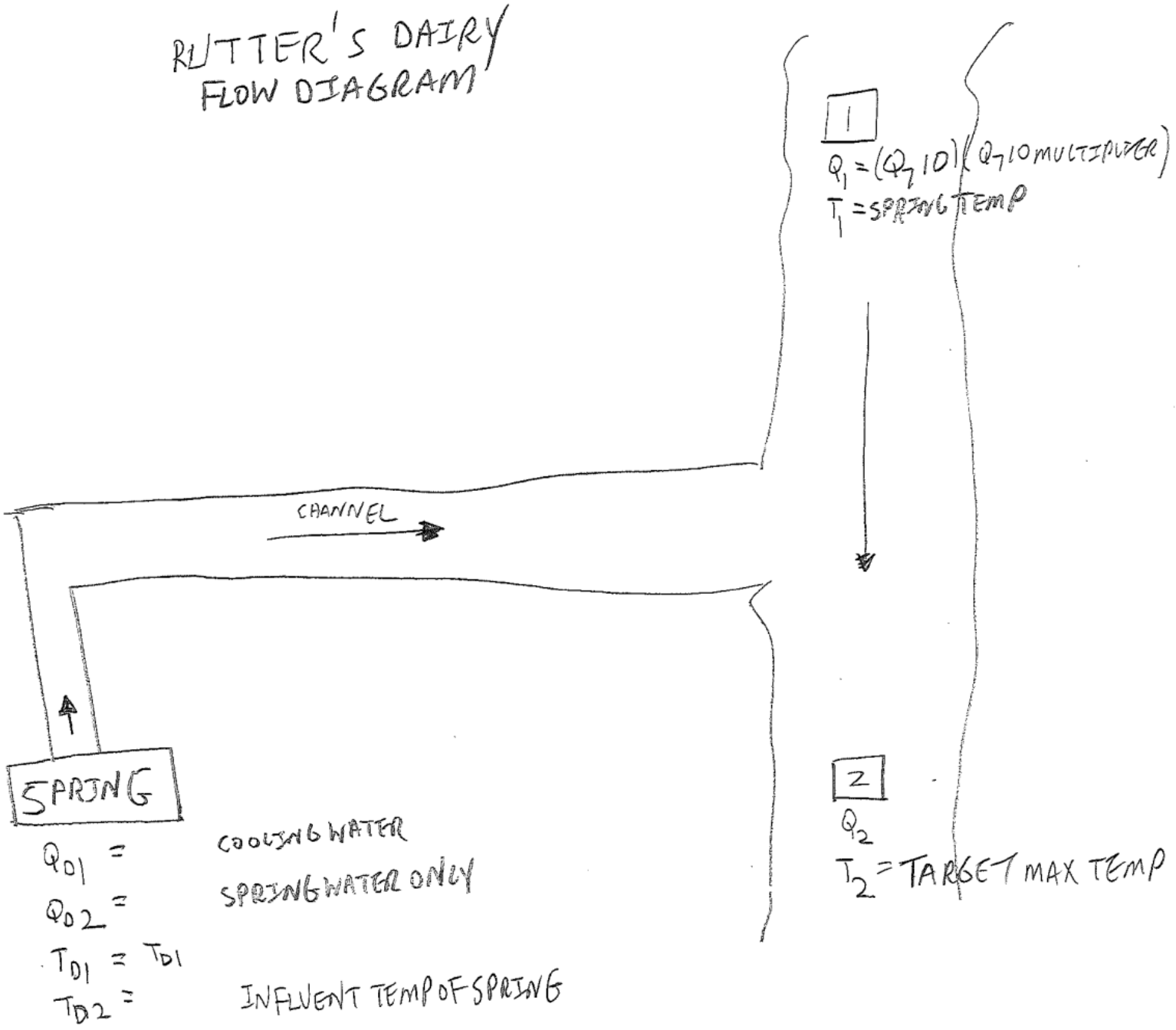
5.0 Conclusions

- The facility intakes cooling water from a spring which then mixes with the receiving stream.
- DEP Spreadsheet does not account for the split use of spring water- 50% spring water used for cooling and 50% spring water additions prior to discharge.
- Facility will need to provide a plan to meet the compliance temperatures
- Facility may collect water temperature closer to discharge point during winter months and collect water temperatures at their normal station in other months.
- Facility may consider a method to slow down discharge to cool water temperature to ambient temperature prior to discharge.
- Facility can consider collecting influent spring temperature to support future renewals.
- Facility should collect effluent discharge flow rate
- Assumes that the spring flow is consistently 0.2 MGD (spring water additions)
- The permit shall be amended to incorporate revised thermal limits.

Attachment
Case 2- Withdrawal From Source Other Than Receiving Stream


SOURCE FROM GROUNDWATER,
MUNICIPAL WATER SYSTEM, OR
NON-TRIBUTARY STREAM
Qi, Ti
1
Q1, T1
PLANT
Qd, Td
Q1 + Qd = Q2
Q2, T2
CASE 2
2
WITHDRAWAL FROM OTHER
THAN RECEIVING STREAM

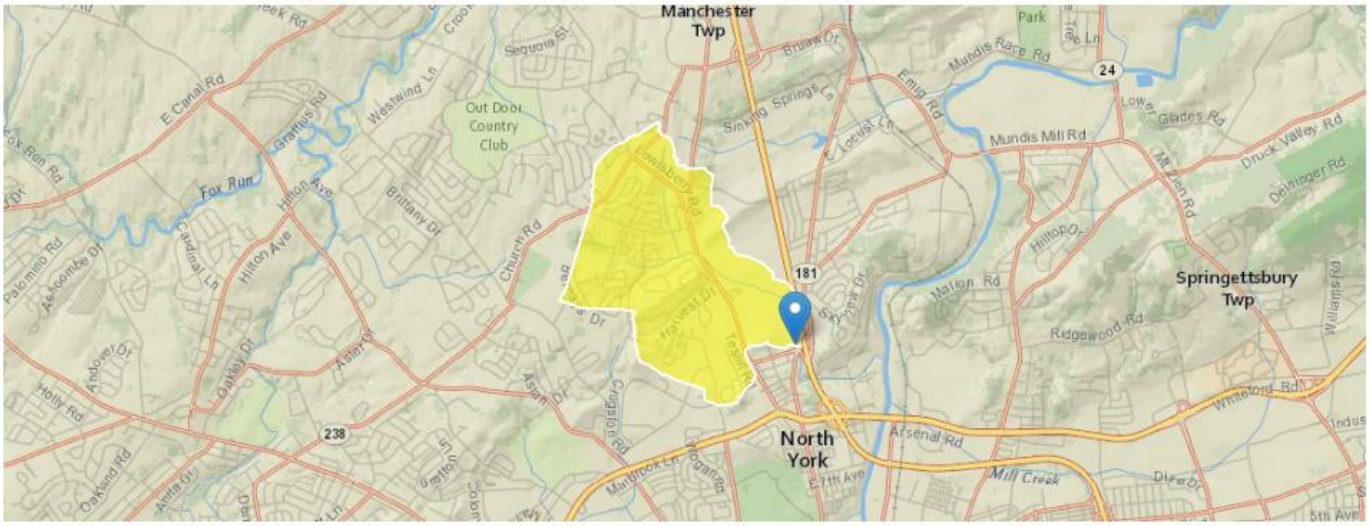
Attachment
Process Flow Schematic


RUTTER'S DAIRY
FLOW DIAGRAM
1
$Q_1 = (Q_7 10)(Q_7 10 \text{ MULTIPLIER})$
T_1 = SPRING TEMP
CHANNEL
SPRING
Q_{D1} =
Q_{D2} =
$T_{D1} = T_{D1}$
T_{D2} =
COOLING WATER
SPRING WATER ONLY
INFLUENT TEMP OF SPRING
2
Q_2
T_2 = TARGET MAX TEMP

Attachment
Stream Stats

StreamStats Report

Region ID: PA
Workspace ID: PA20240508121448046000
Clicked Point (Latitude, Longitude): 39.99133, -76.73573
Time: 2024-05-08 08:15:12 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	2.6257	degrees
DRNAREA	Area that drains to a point on a stream	1.79	square miles
ROCKDEP	Depth to rock	5.1	feet
URBAN	Percentage of basin with urban development	13.5765	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.79	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	2.6257	degrees	1.7	6.4
ROCKDEP	Depth to Rock	5.1	feet	4.13	5.21
URBAN	Percent Urban	13.5765	percent	0	89

Low-Flow Statistics Disclaimers [Low Flow Region 1]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.297	ft^3/s
30 Day 2 Year Low Flow	0.423	ft^3/s
7 Day 10 Year Low Flow	0.118	ft^3/s
30 Day 10 Year Low Flow	0.175	ft^3/s
90 Day 10 Year Low Flow	0.346	ft^3/s

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. (http://pubs.usgs.gov/sir/2006/5130/)

Attachment
Flow Rate Summary

Summary of Effluent Flow Data (Average Monthly)

Monitoring Period Begin Date	Monitoring Period End Date	DMR Received Date	Parameter Name	DMR Value	Units	Statistical Base Code
01/01/2019	01/31/2019	02/11/2019	Flow	0.114	MGD	Average Monthly
02/01/2019	02/28/2019	03/05/2019	Flow	0.111	MGD	Average Monthly
03/01/2019	03/31/2019	04/05/2019	Flow	0.117	MGD	Average Monthly
04/01/2019	04/30/2019	05/03/2019	Flow	0.128	MGD	Average Monthly
05/01/2019	05/31/2019	06/10/2019	Flow	0.138	MGD	Average Monthly
06/01/2019	06/30/2019	07/08/2019	Flow	0.154	MGD	Average Monthly
07/01/2019	07/31/2019	08/07/2019	Flow	0.188	MGD	Average Monthly
08/01/2019	08/31/2019	09/06/2019	Flow	0.174	MGD	Average Monthly
09/01/2019	09/30/2019	10/10/2019	Flow	0.201	MGD	Average Monthly
10/01/2019	10/31/2019	11/12/2019	Flow	0.201	MGD	Average Monthly
11/01/2019	11/30/2019	12/20/2019	Flow	0.193	MGD	Average Monthly
12/01/2019	12/31/2019	01/10/2020	Flow	0.179	MGD	Average Monthly
01/01/2020	01/31/2020	02/06/2020	Flow	0.164	MGD	Average Monthly
02/01/2020	02/29/2020	03/06/2020	Flow	0.171	MGD	Average Monthly
03/01/2020	03/31/2020	04/16/2020	Flow	0.175	MGD	Average Monthly
04/01/2020	04/30/2020	05/15/2020	Flow	0.176	MGD	Average Monthly
05/01/2020	05/31/2020	06/15/2020	Flow	0.193	MGD	Average Monthly
06/01/2020	06/30/2020	07/17/2020	Flow	0.212	MGD	Average Monthly
07/01/2020	07/31/2020	08/17/2020	Flow	0.219	MGD	Average Monthly
08/01/2020	08/31/2020	09/16/2020	Flow	0.203	MGD	Average Monthly
09/01/2020	09/30/2020	10/27/2020	Flow	0.205	MGD	Average Monthly
10/01/2020	10/31/2020	11/18/2020	Flow	0.197	MGD	Average Monthly
11/01/2020	11/30/2020	12/30/2020	Flow	0.181	MGD	Average Monthly
12/01/2020	12/31/2020	01/19/2021	Flow	0.189	MGD	Average Monthly
01/01/2021	01/31/2021	02/07/2021	Flow	0.183	MGD	Average Monthly
02/01/2021	02/28/2021	03/25/2021	Flow	0.165	MGD	Average Monthly
03/01/2021	03/31/2021	04/09/2021	Flow	0.195	MGD	Average Monthly
04/01/2021	04/30/2021	05/19/2021	Flow	0.223	MGD	Average Monthly
05/01/2021	05/31/2021	06/15/2021	Flow	0.223	MGD	Average Monthly
06/01/2021	06/30/2021	07/16/2021	Flow	0.206	MGD	Average Monthly
07/01/2021	07/31/2021	08/11/2021	Flow	0.223	MGD	Average Monthly
08/01/2021	08/31/2021	09/14/2021	Flow	0.218	MGD	Average Monthly
09/01/2021	09/30/2021	10/19/2021	Flow	0.225	MGD	Average Monthly
10/01/2021	10/31/2021	11/11/2021	Flow	0.227	MGD	Average Monthly
11/01/2021	11/30/2021	12/23/2021	Flow	0.203	MGD	Average Monthly
12/01/2021	12/31/2021	01/14/2022	Flow	0.206	MGD	Average Monthly
01/01/2022	01/31/2022	03/15/2022	Flow	0.188	MGD	Average Monthly
02/01/2022	02/28/2022	03/24/2022	Flow	0.194	MGD	Average Monthly
03/01/2022	03/31/2022	04/25/2022	Flow	0.177	MGD	Average Monthly
04/01/2022	04/30/2022	05/27/2022	Flow	0.132	MGD	Average Monthly
05/01/2022	05/31/2022	06/20/2022	Flow	0.135	MGD	Average Monthly
06/01/2022	06/30/2022	07/22/2022	Flow	0.149	MGD	Average Monthly
07/01/2022	07/31/2022	08/12/2022	Flow	0.165	MGD	Average Monthly
08/01/2022	08/31/2022	09/19/2022	Flow	0.185	MGD	Average Monthly
09/01/2022	09/30/2022	10/20/2022	Flow	0.187	MGD	Average Monthly
10/01/2022	10/31/2022	11/22/2022	Flow	0.152	MGD	Average Monthly
11/01/2022	11/30/2022	12/20/2022	Flow	0.153	MGD	Average Monthly
12/01/2022	12/31/2022	01/11/2023	Flow	0.153	MGD	Average Monthly
01/01/2023	01/31/2023	02/09/2023	Flow	0.155	MGD	Average Monthly
02/01/2023	02/28/2023	03/21/2023	Flow	0.158	MGD	Average Monthly
03/01/2023	03/31/2023	04/19/2023	Flow	0.161	MGD	Average Monthly
04/01/2023	04/30/2023	05/16/2023	Flow	0.165407	MGD	Average Monthly
05/01/2023	05/31/2023	06/06/2023	Flow	0.17	MGD	Average Monthly
06/01/2023	06/30/2023	07/10/2023	Flow	0.15533	MGD	Average Monthly
07/01/2023	07/31/2023	08/21/2023	Flow	0.164943	MGD	Average Monthly
08/01/2023	08/31/2023	09/25/2023	Flow	0.185	MGD	Average Monthly
09/01/2023	09/30/2023	10/02/2023	Flow	0.207	MGD	Average Monthly
10/01/2023	10/31/2023	11/22/2023	Flow	0.182	MGD	Average Monthly
11/01/2023	11/30/2023	12/28/2023	Flow	0.17	MGD	Average Monthly
12/01/2023	12/31/2023	01/25/2024	Flow	0.153	MGD	Average Monthly
01/01/2024	01/31/2024	02/28/2024	Flow	0.15	MGD	Average Monthly
02/01/2024	02/29/2024	03/28/2024	Flow	0.155	MGD	Average Monthly
03/01/2024	03/31/2024	04/28/2024	Flow	0.159	MGD	Average Monthly
			Average	0.18	MGD	Average Monthly
			Maximum	0.23	MGD	Average Monthly

Summary of Effluent Flow Data (Daily Maximum)

Monitoring Period Begin Date	Monitoring Period End Date	DMR Received Date	Parameter Name	DMR Value	Units	Statistical Base Code
01/01/2019	01/31/2019	02/11/2019	Flow	0.157	MGD	Daily Maximum
02/01/2019	02/28/2019	03/05/2019	Flow	0.152	MGD	Daily Maximum
03/01/2019	03/31/2019	04/05/2019	Flow	0.152	MGD	Daily Maximum
04/01/2019	04/30/2019	05/03/2019	Flow	0.172	MGD	Daily Maximum
05/01/2019	05/31/2019	06/10/2019	Flow	0.19	MGD	Daily Maximum
06/01/2019	06/30/2019	07/08/2019	Flow	0.232	MGD	Daily Maximum
07/01/2019	07/31/2019	08/07/2019	Flow	0.261	MGD	Daily Maximum
08/01/2019	08/31/2019	09/06/2019	Flow	0.23	MGD	Daily Maximum
09/01/2019	09/30/2019	10/10/2019	Flow	0.251	MGD	Daily Maximum
10/01/2019	10/31/2019	11/12/2019	Flow	0.26	MGD	Daily Maximum
11/01/2019	11/30/2019	12/20/2019	Flow	0.233	MGD	Daily Maximum
12/01/2019	12/31/2019	01/10/2020	Flow	0.245	MGD	Daily Maximum
01/01/2020	01/31/2020	02/06/2020	Flow	0.203	MGD	Daily Maximum
02/01/2020	02/29/2020	03/06/2020	Flow	0.213	MGD	Daily Maximum
03/01/2020	03/31/2020	04/16/2020	Flow	0.218	MGD	Daily Maximum
04/01/2020	04/30/2020	05/15/2020	Flow	0.231	MGD	Daily Maximum
05/01/2020	05/31/2020	06/15/2020	Flow	0.253	MGD	Daily Maximum
06/01/2020	06/30/2020	07/17/2020	Flow	0.271	MGD	Daily Maximum
07/01/2020	07/31/2020	08/17/2020	Flow	0.259	MGD	Daily Maximum
08/01/2020	08/31/2020	09/16/2020	Flow	0.247	MGD	Daily Maximum
09/01/2020	09/30/2020	10/27/2020	Flow	0.245	MGD	Daily Maximum
10/01/2020	10/31/2020	11/18/2020	Flow	0.231	MGD	Daily Maximum
11/01/2020	11/30/2020	12/30/2020	Flow	0.262	MGD	Daily Maximum
12/01/2020	12/31/2020	01/19/2021	Flow	0.234	MGD	Daily Maximum
01/01/2021	01/31/2021	02/07/2021	Flow	0.223	MGD	Daily Maximum
02/01/2021	02/28/2021	03/25/2021	Flow	0.214	MGD	Daily Maximum
03/01/2021	03/31/2021	04/09/2021	Flow	0.276	MGD	Daily Maximum
04/01/2021	04/30/2021	05/19/2021	Flow	0.276	MGD	Daily Maximum
05/01/2021	05/31/2021	06/15/2021	Flow	0.275	MGD	Daily Maximum
06/01/2021	06/30/2021	07/16/2021	Flow	0.268	MGD	Daily Maximum
07/01/2021	07/31/2021	08/11/2021	Flow	0.265	MGD	Daily Maximum
08/01/2021	08/31/2021	09/14/2021	Flow	0.272	MGD	Daily Maximum
09/01/2021	09/30/2021	10/19/2021	Flow	0.284	MGD	Daily Maximum
10/01/2021	10/31/2021	11/11/2021	Flow	0.279	MGD	Daily Maximum
11/01/2021	11/30/2021	12/23/2021	Flow	0.266	MGD	Daily Maximum
12/01/2021	12/31/2021	01/14/2022	Flow	0.264	MGD	Daily Maximum
01/01/2022	01/31/2022	03/15/2022	Flow	0.244	MGD	Daily Maximum
02/01/2022	02/28/2022	03/24/2022	Flow	0.249	MGD	Daily Maximum
03/01/2022	03/31/2022	04/25/2022	Flow	0.217	MGD	Daily Maximum
04/01/2022	04/30/2022	05/27/2022	Flow	0.22	MGD	Daily Maximum
05/01/2022	05/31/2022	06/20/2022	Flow	0.178	MGD	Daily Maximum
06/01/2022	06/30/2022	07/22/2022	Flow	0.203	MGD	Daily Maximum
07/01/2022	07/31/2022	08/12/2022	Flow	0.224	MGD	Daily Maximum
08/01/2022	08/31/2022	09/19/2022	Flow	0.252	MGD	Daily Maximum
09/01/2022	09/30/2022	10/20/2022	Flow	0.249	MGD	Daily Maximum
10/01/2022	10/31/2022	11/22/2022	Flow	0.225	MGD	Daily Maximum
11/01/2022	11/30/2022	12/20/2022	Flow	0.213	MGD	Daily Maximum
12/01/2022	12/31/2022	01/11/2023	Flow	0.222	MGD	Daily Maximum
01/01/2023	01/31/2023	02/09/2023	Flow	0.216	MGD	Daily Maximum
02/01/2023	02/28/2023	03/21/2023	Flow	0.212	MGD	Daily Maximum
03/01/2023	03/31/2023	04/19/2023	Flow	0.214	MGD	Daily Maximum
04/01/2023	04/30/2023	05/16/2023	Flow	0.228466	MGD	Daily Maximum
05/01/2023	05/31/2023	06/06/2023	Flow	0.233	MGD	Daily Maximum
06/01/2023	06/30/2023	07/10/2023	Flow	0.200605	MGD	Daily Maximum
07/01/2023	07/31/2023	08/21/2023	Flow	0.223756	MGD	Daily Maximum
08/01/2023	08/31/2023	09/25/2023	Flow	0.252	MGD	Daily Maximum
09/01/2023	09/30/2023	10/02/2023	Flow	0.28	MGD	Daily Maximum
10/01/2023	10/31/2023	11/22/2023	Flow	0.257	MGD	Daily Maximum
11/01/2023	11/30/2023	12/28/2023	Flow	0.238	MGD	Daily Maximum
12/01/2023	12/31/2023	01/25/2024	Flow	0.215	MGD	Daily Maximum
01/01/2024	01/31/2024	02/28/2024	Flow	0.214	MGD	Daily Maximum
02/01/2024	02/29/2024	03/28/2024	Flow	0.215	MGD	Daily Maximum
03/01/2024	03/31/2024	04/28/2024	Flow	0.211	MGD	Daily Maximum
			Average	0.23	MGD	Daily Maximum
			Maximum	0.28	MGD	Daily Maximum

Attachment
DEP Thermal Worksheets

Facility:	**Rutters Dairy**
Permit Number:	PA0081418
Stream Name:	Tributary 08055 to Codorus Creek
Analyst/Engineer:	DEP
Stream Q7-10 (cfs):	0.118

	Facility Flows				Stream Flows			
	Intake (Stream) (MGD)	Intake (External) (MGD)	Consumptive Loss (MGD)	Discharge Flow (MGD)	PMF	Upstream Stream Flow (cfs)	Adjusted Stream Flow (cfs)	Downstream Stream Flow (cfs)
Jan 1-31		0.4	0	0.4	1.00	0.38	0.38	1.00
Feb 1-29		0.4	0	0.4	1.00	0.41	0.41	1.03
Mar 1-31		0.4	0	0.4	1.00	0.83	0.83	1.44
Apr 1-15		0.4	0	0.4	1.00	1.10	1.10	1.72
Apr 16-30		0.4	0	0.4	1.00	1.10	1.10	1.72
May 1-15		0.4	0	0.4	1.00	0.60	0.60	1.22
May 16-31		0.4	0	0.4	1.00	0.60	0.60	1.22
Jun 1-15		0.4	0	0.4	1.00	0.35	0.35	0.97
Jun 16-30		0.4	0	0.4	1.00	0.35	0.35	0.97
Jul 1-31		0.4	0	0.4	1.00	0.20	0.20	0.82
Aug 1-15		0.4	0	0.4	1.00	0.17	0.17	0.78
Aug 16-31		0.4	0	0.4	1.00	0.17	0.17	0.78
Sep 1-15		0.4	0	0.4	1.00	0.13	0.13	0.75
Sep 16-30		0.4	0	0.4	1.00	0.13	0.13	0.75
Oct 1-15		0.4	0	0.4	1.00	0.14	0.14	0.76
Oct 16-31		0.4	0	0.4	1.00	0.14	0.14	0.76
Nov 1-15		0.4	0	0.4	1.00	0.19	0.19	0.81
Nov 16-30		0.4	0	0.4	1.00	0.19	0.19	0.81
Dec 1-31		0.4	0	0.4	1.00	0.28	0.28	0.90

Facility:	**Rutters Dairy**							
Permit Number:	PA0081418							
Stream:	Tributary 08055 to Codorus Creek							
	WWF			**WWF**		**WWF**		**PMF**
	Ambient Stream	Ambient Stream	Target Maximum	Daily		Daily		
	Temperature (ºF)	Temperature (ºF)	Stream Temp.[1]	WLA[2]		WLA[3]	at Discharge	
	(Default)	(Site-specific data)	(ºF)	(Million BTUs/day)		(ºF)	Flow (MGD)	
Jan 1-31	35	54.2	55.2	N/A -- Case 2		55.8	0.4	1.00
Feb 1-29	35	54.2	55.2	N/A -- Case 2		55.9	0.4	1.00
Mar 1-31	40	54.2	55.2	N/A -- Case 2		56.5	0.4	1.00
Apr 1-15	47	54.2	55.2	N/A -- Case 2		57.0	0.4	1.00
Apr 16-30	53	54.2	58	N/A -- Case 2		64.7	0.4	1.00
May 1-15	58	54.2	64	N/A -- Case 2		73.5	0.4	1.00
May 16-31	62	54.2	72	N/A -- Case 2		89.3	0.4	1.00
Jun 1-15	67	54.2	80	N/A -- Case 2		94.8	0.4	1.00
Jun 16-30	71	54.2	84	N/A -- Case 2		101.0	0.4	1.00
Jul 1-31	75	54.2	87	N/A -- Case 2		97.6	0.4	1.00
Aug 1-15	74	54.2	87	N/A -- Case 2		95.8	0.4	1.00
Aug 16-31	74	54.2	87	N/A -- Case 2		95.8	0.4	1.00
Sep 1-15	71	54.2	84	N/A -- Case 2		90.3	0.4	1.00
Sep 16-30	65	54.2	78	N/A -- Case 2		83.0	0.4	1.00
Oct 1-15	60	54.2	72	N/A -- Case 2		76.1	0.4	1.00
Oct 16-31	54	54.2	66	N/A -- Case 2		68.7	0.4	1.00
Nov 1-15	48	54.2	58	N/A -- Case 2		59.2	0.4	1.00
Nov 16-30	42	54.2	55.2	N/A -- Case 2		55.5	0.4	1.00
Dec 1-31	37	54.2	55.2	N/A -- Case 2		55.7	0.4	1.00

[1] This is the maximum of the WWF WQ criterion or the ambient temperature. The ambient temperature may be either the design (median) temperature for WWF, or the ambient stream temperature based on site-specific data entered by the user. A minimum of 1ºF above ambient stream temperature is allocated.

[2] The WLA expressed in Million BTUs/day is valid for Case 1 scenarios, and disabled for Case 2 scenarios.

[3] The WLA expressed in ºF is valid only if the limit is tied to a daily discharge flow limit (may be used for Case 1 or Case 2). WLAs greater than 110ºF are displayed as 110ºF.

Attachment
Existing Permit Limits

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 39° 59' 29.00" , **Longitude** 76° 44' 9.00" , **River Mile Index** 0.92 , **Stream Code** 8055

Receiving Waters: Unnamed Tributary to Codorus Creek (WWF)

Type of Effluent: Noncontact Cooling Water (NCCW)

1. The permittee is authorized to discharge during the period from **April 1, 2021** through **March 31, 2026**.

2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

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	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Temperature (deg F) (°F) Jan 1 - 31	XXX	XXX	XXX	49.0	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Feb 1 - 29	XXX	XXX	XXX	50.2	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Mar 1 - 31	XXX	XXX	XXX	68.7	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Apr 1 - 15	XXX	XXX	XXX	78.1	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Apr 16 - 30	XXX	XXX	XXX	84.1	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) May 1 - 15	XXX	XXX	XXX	81.7	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) May 16 - 31	XXX	XXX	XXX	101.6	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Jun 1 - 15	XXX	XXX	XXX	102.4	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Jun 16 - 30	XXX	XXX	XXX	106.4	XXX	XXX	1/day	I-S

Outfall 001 , Continued (from 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		
Temperature (deg F) (°F) Jul 1 - 31	XXX	XXX	XXX	96.5	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Aug 1 - 15	XXX	XXX	XXX	97.5	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Aug 16 - 31	XXX	XXX	XXX	97.5	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Sep 1 - 15	XXX	XXX	XXX	92.2	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Sep 16 - 30	XXX	XXX	XXX	86.2	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Oct 1 - 15	XXX	XXX	XXX	80.9	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Oct 16 - 31	XXX	XXX	XXX	74.9	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Nov 1 - 15	XXX	XXX	XXX	68.5	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Nov 16 - 30	XXX	XXX	XXX	58.4	XXX	XXX	1/day	I-S
Temperature (deg F) (°F) Dec 1 - 31	XXX	XXX	XXX	50.7	XXX	XXX	1/day	I-S

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001