Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0247537**
Facility Type	**Industrial**	APS ID	**835064**
Major / Minor	**Minor**	Authorization ID	**1498032**

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

Applicant and Facility Information

Applicant Name	**Four Seasons Produce Inc.**	Facility Name	**Four Seasons Produce Inc.**
Applicant Address	400 Wabash Road, PO Box 788	Facility Address	400 Wabash Road
	Ephrata, PA 17522		Ephrata, PA 17522
Applicant Contact	Randy Groff	Facility Contact	Randy Groff
Applicant Phone	(717) 721-2795	Facility Phone	(717) 721-2798
Client ID	136034	Site ID	637527
SIC Code	4222	Municipality	East Cocalico Township
SIC Description	Trans. & Utilities - Refrigerated Warehousing And Storage	County	Lancaster
Date Application Received	August 30, 2024	EPA Waived?	Yes
Date Application Accepted	September 18, 2024	If No, Reason	

Purpose of Application: NPDES Renewal.

Summary of Review

Four Seasons Produce Inc. has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The existing permit was issued on February 26, 2020, and became effective on March 1, 2020, authorizing discharge of treated sewage from Four Seasons Produce into Cocalico Creek. The existing permit expiration date was February 28, 2025, and the permit has been administratively extended since that time.

Per the previous fact sheet, Four Seasons Produce's distribution center receives, stores, and ships produce. The facility previously used public water in its cooling system and discharged a blowdown from the cooling tower to the public sewer system. The sewer authority wanted the small amount of noncontact cooling water out of the system. Four Seasons produce now discharges the blowdown to its stormwater detention pond, where it flows to Cocalico Creek by way of the storm drain piping system.

Changes in this renewal: Total Dissolved Solids monitoring has been included in the permit. Outfall 002 has been added to the NPDES permit to designate the stormwater outfall located in the northwestern portion of the property.

Supplemental information for this facility is provided at the end of this fact sheet.

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

Approve	Deny	Signatures	Date
X		Benjamin R. Lockwood Benjamin R. Lockwood / Environmental Engineering Specialist	October 7, 2025
X		Maria D. Bebenek for Daniel W. Martin, P.E. / Environmental Engineer Manager	October 17, 2025

Summary of Review

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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.029
Latitude	40º 12' 14"	Longitude	76º 9' 6"
Quad Name		Quad Code	
Wastewater Description:	Noncontact Cooling Water (NCCW) and Stormwater		
Receiving Waters	Cocalico Creek (WWF)	Stream Code	7656
NHD Com ID	57461731	RMI	13.5
Drainage Area	41.5 mi^2	Yield (cfs/mi^2)	0.095
Q_{7-10} Flow (cfs)	3.98	Q_{7-10} Basis	USGS PA StreamStats
Elevation (ft)	353	Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	WWF
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	Siltation, Habitat Alterations, Nutrients, Siltation, Pathogens		
Source(s) of Impairment	Agriculture, Habitat Modification – Other Than Hydromodification, Agriculture, Urban Runoff/Storm Sewers, Source Unknown		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Ephrata Area Joint Authority Water System		
PWS Waters	Cocalico Creek	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	3.4

Changes Since Last Permit Issuance: The USGS PA StreamStats is showing a drainage area of 41.5 mi^2 and a Q_{7-10} flow of 3.98 cfs at the point of discharge.

Other Comments: None

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:	7/20/2020: An administrative inspection was conducted. The facility was operating normally and there were no outstanding issues or needs. 3/2/2020: A routine inspection was conducted. The stormwater drain appeared free of debris and the chiller effluent was not discharging at the time of inspection. The pond was free of debris, algae, sheen, and foaming. It was noted that stormwater on the eastern side of the property appeared to discharge to Cocalico Creek separately from Outfall 001. It was recommended to list this outfall separately on annual stormwater reports. 3/7/2025: A routine inspection was conducted. A second storm sewer system collects stormwater from the upgradient areas northeast of the facility before discharging. It was recommended that a second stormwater outfall be added to the renewal permit.

Other Comments: There are currently no open violations for this Applicant.

Compliance History

DMR Data for Outfall 001 (from June 1, 2024 to May 31, 2025)

Parameter	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24
Flow (MGD) Average Monthly	0.020	0.0161	12	0.0457	0.0456	0.007	0.011	0.017	0.022	0.027	0.031	0.045
Flow (MGD) Daily Maximum	0.027	0.0248	0.022	0.0457	0.0456	0.010	0.024	0.022	0.028	0.033	0.045	0.045
pH (S.U.) Instantaneous Minimum	8.5	7.8	7.8	7.8	7.7	47.5	8.8	8.8	8.7	8.7	8.5	8.4
pH (S.U.) Instantaneous Maximum	8.8	8.2	8.1	8.2	8.3	8.9	8.9	8.9	9.0	9.0	8.9	8.7
Temperature (ºF) Instantaneous Minimum	66	62	60	59	57	60	62	62	62	64	69	64
Temperature (ºF) Average Monthly	69	64	62	60	58	62	64	65	68	70	74	68
Temperature (ºF) Daily Maximum	73	66	64	62	60	64	66	69	73	79	80	77
Total Copper (mg/L) Average Monthly	0.056	0.019	0.032	0.01	0.015	0.001	0.031	0.013	0.038	0.025	0.016	0.020

Existing Effluent Limitations and Monitoring Requirements

Outfall 001

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/day	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	2/week	Grab
Temperature (ºF)	XXX	XXX	Report Inst Min	Report	Report Daily Max	XXX	2/week	I-S
Copper, Total	XXX	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite

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

at Outfall 001

Development of Effluent Limitations

Outfall No.	001	**Design Flow (MGD)**	.00245
Latitude	40º 12' 14.00"	**Longitude**	-76º 9' 6.00"

Wastewater Description: Noncontact Cooling Water (NCCW)

pH

PA Code §§ 95.2(1) requires effluent pH limits of 6.0 to 9.0 S.U. at all times in effluent. The permit will continue to require pH limit of 6.0 to 9.0 S.U.

Temperature Limitations

A reasonable potential (RP) analysis was performed for temperature which is the main pollutant of concern in the NCCW. Effluent limitations for temperature were calculated using the Case 2 Thermal Worksheet with an updated wastewater flow of 0.029 mgd, which is the maximum daily discharge. A stream $Q_{7\text{-}10}$ flow of 3.98 cfs was used in the temperature worksheet. The worksheet recommended permit limits for a discharge to WWF of 110°F, which is the cap for limits generated by the worksheet. This is consistent with the existing Temperature limit for Outfall 001; therefore, it will remain the same. A printout of the worksheet is attached.

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 3 WIP. As part of the Phase 3 WIP, a Phase 3 Watershed Implementation Plan Wastewater Supplement (Phase 3 Supplement) was developed, providing an update on TMDL implementation for point sources and DEP's current implementation strategy for wastewater. The Phase 3 Supplement was most recently revised on April 2, 2025. Industrial discharges have been prioritized by Central Office based on their delivered TN and TP loadings to the Bay. Significant industrial wastewater dischargers are facilities that discharge more than 75 lbs/day of TN or 25 lbs/day of TP on an average annual basis and the rest are classified as non-significant dischargers. DEP developed a Chesapeake Bay industrial waste (IW) monitoring plan for all industrial facilities that discharge to the Chesapeake Bay. This facility is classified as a non-significant discharger with little or no potential to introduce nutrients to the receiving stream; therefore, no monitoring for TP and TN series will be required at this time for Outfall 001.

Toxics

Effluent sample results for toxic pollutants reported on the renewal application were entered into DEP's Toxics Management Spreadsheet Version 1.3 to develop appropriate permit requirements for toxic pollutants of concern. The Toxics Management Spreadsheet combines the functions of PENTOXSD and DEP's Toxics Screening Analysis. Default stream hardness and pH values were used in the spreadsheet. A default discharge hardness of 100 mg/l was used in modeling. Based on effluent sample results reported on the application, the Toxics Management Spreadsheet did not recommend any additional parameters receive monitoring or limits.

This data was analyzed based on the guidelines found in DEP's Water Quality Toxics Management Strategy (Document No. 361-0100-003) and DEP's SOP No. BPNPSM-PMT-033. The results are attached to this fact sheet. The Toxics Management Spreadsheet uses the following logic:

a. Establish average monthly and IMAX limits in the draft permit where the maximum reported concentration exceeds 50% of the WQBEL.
b. For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
c. For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10%-50% of the WQBEL.

Since the reported maximum concentrations were less than 10% of their respective WQBEL, per DEP's SOP No. BPNPSM-PMT-033, no additional limits or monitoring are necessary.

Chemical Additives

The following chemical additives are currently used at the plant and are expected to be present in the effluent:

Chemical Additive	Purpose	Maximum Usage (lb/day)	Usage Frequency
Formula 1345	Penetrate and disperse silt and slime	1.0	
Formula 1595	Biocide	72 ppm	Continuous
Formula 3020-F	Foam Control	0.42	
Formula 1598-G	Bacteria and biofilm control	0.18	
Ultra-Kleen Solution #1	Biocide	25	2/Week
Formula 1020	Biocide	21.62 ounces/1000 gal water	Continuous

These chemicals have been added to DEP's Approved List of Chemical Additives. The permit will include Part C conditions for chemical additive usage and reporting requirements.

Total Dissolved Solids (TDS)

DEP's SOP No. BCW-PMT-032 states that at a minimum, a monitoring requirement should be established for TDS for any discharge that exceeds 1,000 mg/l. Columbia Water Company reported a maximum effluent value of 1,070 mg/l for TDS in the NPDES application. Therefore, monitoring for TDS will be included in the renewal permit.

Stormwater

Outfall 001 receives stormwater for the southern portion of the property. A second storm system collects stormwater from the upgradient areas northeast of the facility before discharging to the MS4 system through an outfall located west of the Truck Shop. This area is designated as non-industrial, but it will be included in the NPDES renewal due to chemical storage areas and truck traffic within the drainage area. It will be designated in the NPDES permit as Outfall 002. Four Seasons Produce is classified under SIC Code 8915 All materials are stored under roof, so the stormwater discharge does not fall within the EPA definition of stormwater associated with industrial activity per 40 CFR 122.26(b)(14); therefore, monitoring will not be required. Part C requirements for stormwater outfalls will be included in the permit.

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 an aquatic life impairment for siltation due to agriculture, habitat alterations due to habitat modification other than hydromodification, nutrients due to agriculture, and siltation due to urban runoff/storm sewers. There is a recreational impairment due to pathogens from an unknown source.

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 are addressed by DEP in this fact sheet.

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" (386-0400-001), 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/day	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	2/week	Grab
Temperature (ºF)	XXX	XXX	Report Inst Min	Report	Report Daily Max	XXX	2/week	I-S
Total Copper	XXX	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	24-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, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☒	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☒	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 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, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 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, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: BCW-PMT-032, No. BPNPSM-PMT-001
☐	Other:

Four Seasons Produce PA0247537 Outfall 001

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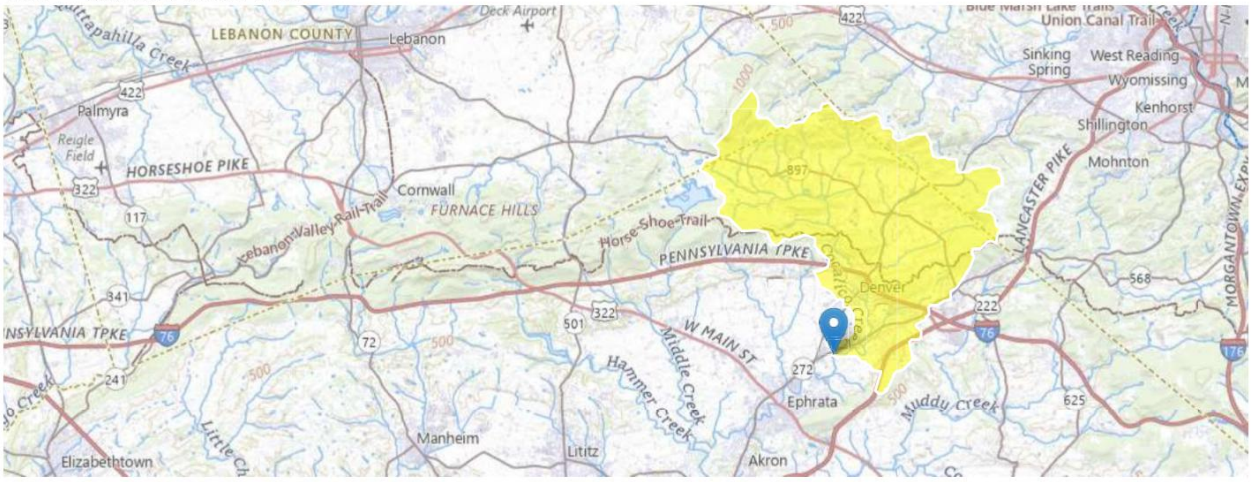

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	5.3787	degrees
DRNAREA	Area that drains to a point on a stream	41.5	square miles
ROCKDEP	Depth to rock	4.4	feet
URBAN	Percentage of basin with urban development	5.3658	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLOPD	Mean Basin Slope degrees	5.3787	degrees	1.7	6.4
DRNAREA	Drainage Area	41.5	square miles	4.78	1150
ROCKDEP	Depth to Rock	4.4	feet	4.13	5.21
URBAN	Percent Urban	5.3658	percent	0	89

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

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	7.99	ft^3/s	46	46
30 Day 2 Year Low Flow	10.4	ft^3/s	38	38
7 Day 10 Year Low Flow	3.98	ft^3/s	51	51
30 Day 10 Year Low Flow	5.25	ft^3/s	46	46

Statistic	Value	Unit	SE	ASEp
90 Day 10 Year Low Flow	7.77	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. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.29.3
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Four Seasons Produce PA0247537 RMI = 12.44

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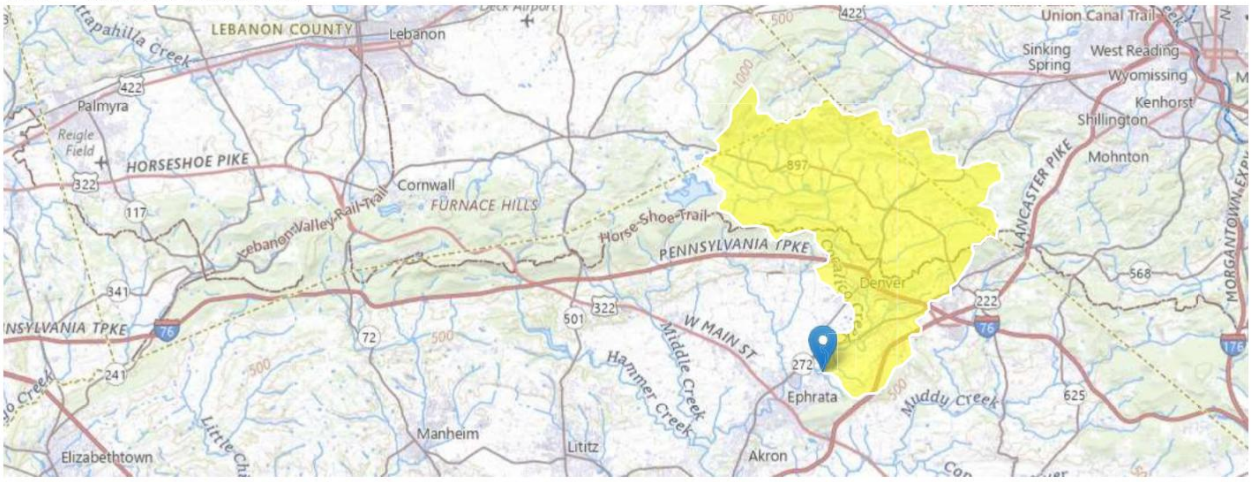

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	5.3394	degrees
DRNAREA	Area that drains to a point on a stream	43.3	square miles
ROCKDEP	Depth to rock	4.4	feet
URBAN	Percentage of basin with urban development	5.4585	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLOPD	Mean Basin Slope degrees	5.3394	degrees	1.7	6.4
DRNAREA	Drainage Area	43.3	square miles	4.78	1150
ROCKDEP	Depth to Rock	4.4	feet	4.13	5.21
URBAN	Percent Urban	5.4585	percent	0	89

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

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	8.28	ft^3/s	46	46
30 Day 2 Year Low Flow	10.7	ft^3/s	38	38
7 Day 10 Year Low Flow	4.12	ft^3/s	51	51
30 Day 10 Year Low Flow	5.44	ft^3/s	46	46

Statistic	Value	Unit	SE	ASEp
90 Day 10 Year Low Flow	8.07	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. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.29.3
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Flow Data for Thermal Discharge Analysis

Facility: Four Seasons Produce Inc.
Permit Number: PA0247537
Stream Name: Cocalico Creek
Analyst/Engineer: Benjamin Lockwood
Stream Q7-10 (cfs): 3.98

	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	0.029	0	0.029	1.00	12.74	12.74	12.78
Feb 1-29	0	0.029	0	0.029	1.00	13.93	13.93	13.97
Mar 1-31	0	0.029	0	0.029	1.00	27.86	27.86	27.90
Apr 1-15	0	0.029	0	0.029	1.00	37.01	37.01	37.06
Apr 16-30	0	0.029	0	0.029	1.00	37.01	37.01	37.06
May 1-15	0	0.029	0	0.029	1.00	20.30	20.30	20.34
May 16-31	0	0.029	0	0.029	1.00	20.30	20.30	20.34
Jun 1-15	0	0.029	0	0.029	1.00	11.94	11.94	11.98
Jun 16-30	0	0.029	0	0.029	1.00	11.94	11.94	11.98
Jul 1-31	0	0.029	0	0.029	1.00	6.77	6.77	6.81
Aug 1-15	0	0.029	0	0.029	1.00	5.57	5.57	5.62
Aug 16-31	0	0.029	0	0.029	1.00	5.57	5.57	5.62
Sep 1-15	0	0.029	0	0.029	1.00	4.38	4.38	4.42
Sep 16-30	0	0.029	0	0.029	1.00	4.38	4.38	4.42
Oct 1-15	0	0.029	0	0.029	1.00	4.78	4.78	4.82
Oct 16-31	0	0.029	0	0.029	1.00	4.78	4.78	4.82
Nov 1-15	0	0.029	0	0.029	1.00	6.37	6.37	6.41
Nov 16-30	0	0.029	0	0.029	1.00	6.37	6.37	6.41
Dec 1-31	0	0.029	0	0.029	1.00	9.55	9.55	9.60

Please forward all comments to Tom Starosta at 717-787-4317, tstarosta@state.pa.us.
Version 2.0 -- 07/01/2005 Reference: Implementation Guidance for Temperature Criteria, DEP-ID: 391-2000-017
NOTE: The user can only edit fields that are blue.
NOTE: MGD x 1.547 = cfs.

PA Temperature Criteria and Stream Flow Multipliers

Facility: **Four Seasons Produce Inc.**
Permit Number: PA0247537
Stream: Cocalico Creek

	WWF Criteria (ºF)	CWF Criteria (ºF)	TSF Criteria (ºF)	316 Criteria (ºF)	Q7-10 Multipliers (Used in Analysis)	Q7-10 Multipliers (Default - Info Only)
Jan 1-31	40	38	40	0	3.2	3.2
Feb 1-29	40	38	40	0	3.5	3.5
Mar 1-31	46	42	46	0	7	7
Apr 1-15	52	48	52	0	9.3	9.3
Apr 16-30	58	52	58	0	9.3	9.3
May 1-15	64	54	64	0	5.1	5.1
May 16-31	72	58	68	0	5.1	5.1
Jun 1-15	80	60	70	0	3	3
Jun 16-30	84	64	72	0	3	3
Jul 1-31	87	66	74	0	1.7	1.7
Aug 1-15	87	66	80	0	1.4	1.4
Aug 16-31	87	66	87	0	1.4	1.4
Sep 1-15	84	64	84	0	1.1	1.1
Sep 16-30	78	60	78	0	1.1	1.1
Oct 1-15	72	54	72	0	1.2	1.2
Oct 16-31	66	50	66	0	1.2	1.2
Nov 1-15	58	46	58	0	1.6	1.6
Nov 16-30	50	42	50	0	1.6	1.6
Dec 1-31	42	40	42	0	2.4	2.4

NOTES:
WWF= Warm water fishes
CWF= Cold water fishes
TSF= Trout stocking

Facility: **Four Seasons Produce Inc.**
Permit Number: PA0247537
Stream: Cocalico Creek

	WWF Ambient Stream Temperature (ºF) (Default)	Ambient Stream Temperature (ºF) (Site-specific data)	Target Maximum Stream Temp.[1] (ºF)	WWF Daily WLA[2] (Million BTUs/day)	WWF Daily WLA[3] (ºF)	at Discharge Flow (MGD)	PMF
Jan 1-31	35	0	40	N/A -- Case 2	110.0	0.029	1.00
Feb 1-29	35	0	40	N/A -- Case 2	110.0	0.029	1.00
Mar 1-31	40	0	46	N/A -- Case 2	110.0	0.029	1.00
Apr 1-15	47	0	52	N/A -- Case 2	110.0	0.029	1.00
Apr 16-30	53	0	58	N/A -- Case 2	110.0	0.029	1.00
May 1-15	58	0	64	N/A -- Case 2	110.0	0.029	1.00
May 16-31	62	0	72	N/A -- Case 2	110.0	0.029	1.00
Jun 1-15	67	0	80	N/A -- Case 2	110.0	0.029	1.00
Jun 16-30	71	0	84	N/A -- Case 2	110.0	0.029	1.00
Jul 1-31	75	0	87	N/A -- Case 2	110.0	0.029	1.00
Aug 1-15	74	0	87	N/A -- Case 2	110.0	0.029	1.00
Aug 16-31	74	0	87	N/A -- Case 2	110.0	0.029	1.00
Sep 1-15	71	0	84	N/A -- Case 2	110.0	0.029	1.00
Sep 16-30	65	0	78	N/A -- Case 2	110.0	0.029	1.00
Oct 1-15	60	0	72	N/A -- Case 2	110.0	0.029	1.00
Oct 16-31	54	0	66	N/A -- Case 2	110.0	0.029	1.00
Nov 1-15	48	0	58	N/A -- Case 2	110.0	0.029	1.00
Nov 16-30	42	0	50	N/A -- Case 2	110.0	0.029	1.00
Dec 1-31	37	0	42	N/A -- Case 2	110.0	0.029	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.

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Four Seasons Produce Inc.** NPDES Permit No.: **PA0247537** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **NCCW and Stormwater**

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
0.029	100	7.4						

					0 if left blank		*0.5 if left blank*		*0 if left blank*			*1 if left blank*	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		1070									
	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		0.056									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<										
	Dissolved Iron	µg/L											
	Total Iron	µg/L											
	Total Lead	µg/L											
	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	<										
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										

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	<										

	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											
	Other (TYPE HERE)												

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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Four Seasons Produce Inc., NPDES Permit No. PA0247537, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Cocalico Creek**

No. Reaches to Model: **1**

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	007656	13.5	353	41.5			Yes
End of Reach 1	007656	12.44	351	43.3			Yes

Q_{7-10}

Location	RMI	LFY (cfs/mi^2)*	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	13.5	0.1	3.98									271	8.4		
End of Reach 1	12.44	0.1	4.12									271	8.4		

Q_h

Location	RMI	LFY (cfs/mi^2)	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	13.5														
End of Reach 1	12.44														

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Toxics Management Spreadsheet
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Model Results

Four Seasons Produce Inc., NPDES Permit No. PA0247537, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | ◉ All ○ Inputs ○ Results ○ Limits

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.321 Analysis Hardness (mg/l): 265.2 Analysis pH: 8.28

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 Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	33.687	35.1	1,034	Chem Translator of 0.96 applied

☑ ***CFC*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): 269.09 Analysis pH: 8.36

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 Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	20.867	21.7	1,950	Chem Translator of 0.96 applied

☑ ***THH*** CCT (min): ###### 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 Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): 44.560 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 Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	

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

No. Samples/Month: 4

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

☑ ***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 Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Total Copper	0.66	mg/L	Discharge Conc ≤ 10% WQBEL