pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PAS236107**
Facility Type	**Storm Water**	APS ID	**1117285**
Major / Minor	**Minor**	Authorization ID	**1491287**

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

Applicant and Facility Information

Applicant Name	**Mitsubishi Chemical Advanced Materials, Inc.**	Facility Name	**Delmont Manufacturing**
Applicant Address	201 Industrial Drive Delmont, PA 15626-1016	Facility Address	201 Industrial Drive Delmont, PA 15626-1016
Applicant Contact	Samantha Zaragoza	Facility Contact	Samantha Zaragoza
Applicant Phone	(724) 468-7057	Facility Phone	(724) 468-7057
Client ID	3734	Site ID	245250
SIC Code	3081 (Primary); 2821	Municipality	Salem Township
SIC Description	Unsupported Plastics Film and Sheet (Primary); Plastics Materials, Synthetic Resins, and Non-vulcanizable Elastomers	County	Westmoreland
Date Application Received	July 2, 2024	EPA Waived?	Yes
Date Application Accepted	July 9, 2024	If No, Reason	

Purpose of Application: Renewal NPDES permit for stormwater discharge from existing facility to HQ waters

Summary of Review

The Department received a renewal NPDES permit application for industrial stormwater for the Mitsubishi Chemical Advanced Materials, Inc. Delmont Manufacturing facility on 7/2/2024. The previous permit was issued on 1/8/2020 with an effective date of 2/1/2020 and an expiration date of 1/31/2025.

The Delmont Manufacturing facility (Figure 1) has been in operation since 1989 and manufactures sheet plastics of Ultra High Molecular Weight (UHMW) Polyethylene. This is accomplished using large presses which are heated by heat transfer fluid methods. The heated presses are cooled by running the heat transfer fluid through the water cooler heat exchanger and back to the presses. Any water that isn't evaporated through this process is blowdown water that is sent to the sanitary sewer. The facility includes a main building, office buildings, raw material silo area, two parking lots, a parking/storage area, a scrap storage area, and a bulk water storage area for the sprinkler pump. The main building includes a press room, boiler room, mixing room, regrind room, tool room and finish product storage area. About 99 people are employed at the plant and operations occur 24 hours, 7 days a week.

The facility has two outfalls, Outfall 001 and Outfall 002, that discharge to Tributary 43017 to Beaver Run. Tributary 43017 to Beaver Run has a 25 PA Code Chapter 93 High Quality-Cold Water Fishes (HQ-CWF) designated use and is impaired for nutrients and siltation from grazing in riparian or shoreline zones, siltation from agriculture, and pathogens from an unknown source (source: *2024 Integrated Report*). Outfall 001 is the discharge of the retention pond at the southeast corner of site which receives stormwater from the southern, eastern and a small portion of the western parts of the site via catch basins. Stormwater from the southern portion of the site flows into a total of six catch basins. Four additional catch basins are located along the eastern side of the main building. One catch basin is located west of the office building. Industrial activity in

Approve	Deny	Signatures	Date
x		Jace William Marsh / Environmental Engineering Specialist	August 15, 2024
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	August 20, 2024

Summary of Review

the Outfall 001 drainage area mainly consists of truck traffic with some outdoor storage of waste wood. Outfall 002 discharges stormwater from the northern portion of the plant from three catch basins. Industrial activity in the Outfall 002 drainage area mainly consists of pneumatic transfer of UHMW resin from trucks to silos on a concrete pad surrounded by concrete dikes, other truck traffic, outdoor storage of plastic sheets, and outdoor storage of waste wood.

On 10/31/2023, sheen was reported at Outfall 001, catch basins, and the retention pond. Zac Flannigan responded on 11/2/2023. This sheen discharge occurred following excavation of a French drain along the manufacturing building that was connected via catch basin to Outfall 001. During the incident response inspection, sheen was observed in the connecting catch basin. A small amount of sheen was observed up to 600' downstream of Outfall 001 along with three dead fish approximately 5" in length within about 350'-450' downstream of Outfall 001. Periodic dead worms were also observed in the stream up to about 0.28 miles downstream. Booms were deployed at four locations between the discharge point and about 0.5 miles downstream at Lauffer Mine Road. A violation was issued: "Discharge contained sheen that produced an observable change in the receiving waters. [25 Pa. Code 92a.41(c)]". In response, the facility installed underflow dams at the retention pond and cleaned remaining sheen from catch basins. Two spots of sheen no larger than a quarter were observed at the underflow dam in the following days, but none has been observed since. Any future sheen discharges should be intercepted by the underflow dams. The violation has since been closed after two satisfactory follow-up inspections on 11/6/2023 and 11/8/2023.

During these inspections, it was recommended by the inspector to the permittee to change the Outfall 001 sampling location to the inlet of the retention pond that only received stormwater from immediate area around the facility. The other inlet receives stormwater from catch basins along Industrial Drive which capture runoff from not only the road, but upgradient areas. In the renewal application, the permittee requested the new monitoring point for Outfall 001 be at this inlet named IMP 101 in the application, but since sample data submitted through eDMR and sample data submitted with application show a consistent compliance with the only benchmark in the prior permit—a Total Suspended Solids (TSS) concentration of 30 mg/L—the monitoring point of Outfall 001 will remain at the outlet of the retention pond. It is unknown if samples at the proposed IMP 101 would comply with pollutant benchmarks and, furthermore, this sample point would not reflect the stormwater discharge following treatment by the retention pond which could result in unnecessary Corrective Action Plan requirements. During future renewals, the Outfall 001 sampling location may be subject to change if new data and/or reasoning arise.

The permittee currently has one open violation from the Clean Water Program at a facility located in the South Central Region, but none at this facility. Aside from the incident response and follow-up inspections noted above, a compliance evaluation inspection occurred on 7/15/2021 by Zac Flannigan with no violations noted.

The site discharges stormwater to a HQ-CWF so in order to ensure that the discharge does not degrade the stream the PAG-03 No Exposure Certification concentrations will be used as the benchmark values in the permit. The goal for the permittee is to consistently achieve pollutant discharge concentrations that are below these benchmark values; doing this shows that the discharges are uncontaminated stormwater and will maintain and protect the existing quality of Tributary 43017 to Beaver Run.

Summary of Review

Figure 1. Current satellite imagery of the Delmont Manufacturing facility with labels

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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001 and 002	Design Flow (MGD)	0
Latitude	40º 25' 37" (001); 40º 25' 41" (002)	Longitude	-79º 34' 14" (001); -79º 34' 19" (002)
Quad Name	Slickville	Quad Code	1509
Wastewater Description:	Stormwater		
Receiving Waters	Tributary 43017 to Beaver Run (HQ-CWF)	Stream Code	43107
NHD Com ID	125291713	RMI	1.01
Drainage Area	0.11 mi^2	Yield (cfs/mi^2)	0.023
Q_{7-10} Flow (cfs)	0.0025	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1176	Slope (ft/ft)	0.1 (mean basin slope)
Watershed No.	18-B	Chapter 93 Class.	HQ-CWF
Existing Use	n/a	Existing Use Qualifier	n/a
Exceptions to Use	none	Exceptions to Criteria	n/a
Assessment Status	Impaired		
Cause(s) of Impairment	Nutrients, siltation, pathogens		
Source(s) of Impairment	Agriculture, grazing in riparian or shoreline zones, unknown source		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL
Nearest Downstream Public Water Supply Intake	MAWC Sweeney Plant		
PWS Waters	Beaver Run	Flow at Intake (cfs)	1.38
PWS RMI	6.93	Distance from Outfall (mi)	7.81

Changes Since Last Permit Issuance: No significant changes were made.

Other Comments: Only one discharge information summary was created due to negligible differences between these stormwater outfalls.

Development of Effluent Limitations

Outfall No. 001 and 002 **Design Flow (MGD)** 0
Latitude 40º 25' 37" (001); 40º 25' 41" (002) **Longitude** -79º 34' 14" (001); -79º 34' 19" (002)
Wastewater Description: Stormwater

Since Outfall 001 and Outfall 002 discharge stormwater only with no differences between the drainage areas significant enough to warrant separate analyses, effluent limitation for both outfalls are derived together in this section.

Technology-Based Limitations

Outfall 001 and Outfall 002 will be subject to 2022 PAG-03 General Stormwater permit conditions as a minimum requirement because the outfalls discharge stormwater associated with industrial activity. The SIC codes for the facility are 3081—Unsupported Plastics Film and Sheet and 2821— Plastics Materials, Synthetic Resins, and Non-vulcanizable Elastomers so the corresponding appendix of the PAG-03 that applies is Appendix S—Rubber, Miscellaneous Plastic Products and Miscellaneous Manufacturing Industries. The reporting requirements applicable to stormwater discharges under this appendix are shown in Table 1 below. PAG-03 Appendix S best management practices will be included in Part C of the Draft Permit.

Table 1. 2022 PAG-03 Appendix S monitoring requirements

Parameter	Benchmark Values (mg/L)	Measurement Frequency	Sample Type
Total Nitrogen	XXX	1/6 Months	Grab
Total Phosphorus	XXX	1/6 Months	Grab
pH (S.U.)	9.0	1/6 Months	Grab
Total Suspended Solids (TSS)	100	1/6 Months	Grab
Total Zinc	XXX	1/6 Months	Grab

Water Quality-Based Limitations

Stormwater WQBELs

Water quality analyses are typically performed under low-flow (Q7-10) stream conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharges from the outfalls are composed entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations are not proposed.

Total Maximum Daily Loads (TMDL)

Stormwater discharges from Delmont Manufacturing facility are located within the Kiskiminetas-Conemaugh River Watersheds for which the Department has developed a Total Maximum Daily Load (TMDL) for acid mine drainage (AMD) metals. The TMDL was finalized on January 29, 2010 and establishes waste load allocations for the discharge of aluminum, iron and manganese within the Kiskiminetas-Conemaugh River Watersheds. Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state's water resources (USEPA 1991a). Stream reaches within the Kiskiminetas-Conemaugh River Watersheds are included in the state's 2008 Section 303(d) list because of various impairments including metals, pH and sediment. The TMDL includes consideration for each river and tributary within the target watershed and its impairment sources. Stream data is then used to calculate minimum pollutant reductions that are necessary to attain water quality criteria levels. Target concentrations published in the TMDL were based on established water quality criteria of 0.750 $^{mg}/_{L}$ total recoverable aluminum, 1.5 $^{mg}/_{L}$ total recoverable iron based on a 30-day average and 1.0 $^{mg}/_{L}$ total recoverable manganese. The reduction needed to meet the minimum water quality standards is then divided between each known point and non-point

pollutant source in the form of wasteload allocations (WLAs) and load allocations (LAs) respectively. TMDLs prescribe allocations that minimally achieve water quality criteria (i.e., 100 percent use of a stream's assimilative capacity).

This facility, first issued a NPDES permit on 4/9/2004, does not have a WLA in Appendix G of the TMDL nor is it listed in Appendix C listing negligible discharge facilities. Total Aluminum, Total Iron, and Total Manganese are not pollutants of concern in the industry specific pollutant monitoring requirements in the Technology-Based Limitations section above. The previous permit required monitoring for these metals, and the past four eDMR submissions of monitoring results are shown in Table 2. No monitoring for TMDL AMD metals will be imposed for this renewal.

Table 2. AMD metal concentrations in past four eDMR submissions

Outfall	Parameter	Maximum Concentration (mg/L)	Average Concentration (mg/L)
001	Total Aluminum	0.66	0.31
	Total Iron	0.947	0.517
	Total Manganese	0.135	0.10
002	Total Aluminum	0.514	0.354
	Total Iron	0.759	0.465
	Total Manganese	0.072	0.029

Anti-Degradation

Tributary 43017 to Beaver Run has a 25 PA Code Chapter 93 High Quality-Cold Water Fishes (HQ-CWF) designated use. Antidegradation regulations under Chapter 93.4c(a)(l)(i) requires existing use protection when information available indicates a surface water attains or has attained an existing use. Facilities discharging stormwater to a HQ stream are not eligible for PAG-03 permits due to degradation risks, so more stringent stormwater benchmarks must be put into place.

To ensure that the discharge does not degrade the stream, the PAG-03 No Exposure Certification concentrations shown in Table 3 below will be used as the benchmark values in the Draft Permit. If a facility's stormwater discharge meets the stringent concentrations of No Exposure Certification, then it is assumed that the stormwater is uncontaminated and not contributing to stream degradation. These benchmark values are not effluent limitations, and an exceedance of the benchmark value is not a violation. An exceedance of the benchmark provides permittees with an indication that the facility's BMPs may not be sufficiently controlling pollutants in stormwater. A Part C condition is included in the Draft Permit requiring a Corrective Action Plan to evaluate site stormwater controls and BMPs when there is an exceedance of the benchmark values.

Table 3. No Exposure Certification concentrations

Parameter	No Exposure Certification Concentrations (mg/L)
Oil & Grease	≤ 5.0
5-Day Biochemical Oxygen Demand (BOD5)	≤ 10
Chemical Oxygen Demand (COD)	≤ 30
Total Suspended Solids (TSS)	≤ 30
Total Nitrogen	≤ 2.0
Total Phosphorus	≤ 1.0
Total Iron	≤ 3.0
pH (S.U.)	6.0-9.0 (unless precipitation pH is below 6.0)

Anti-Backsliding

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l). Shown in Table 4, previous benchmarks imposed were a combination of Appendix S parameters of the 2016 PAG-03, No Exposure Certification concentrations, and AMD metals of concern from the Kiskiminetas-Conemaugh River Watersheds TMDL.

Table 4. Benchmarks from previous permit

Parameter	Benchmark Values (mg/L)	Measurement Frequency	Sample Type
pH (S.U.)	9.0	1/6 Months	Grab
Total Suspended Solids (TSS)	100	1/6 Months	Grab
Total Aluminum	XXX	1/6 Months	Grab
Total Iron	XXX	1/6 Months	Grab
Total Manganese	XXX	1/6 Months	Grab
Total Zinc	XXX	1/6 Months	Grab

Proposed Effluent Limitations and Monitoring Requirements

Effluent limits imposed at Outfall 001 and Outfall 002 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements as summarized in Table 5. The pH benchmark was adjusted to ≤9.0 S.U. to reflect possible influence of acid rain on stormwater in order to avoid benchmark exceedances from natural causes.

Table 5. Proposed stormwater effluent limitations

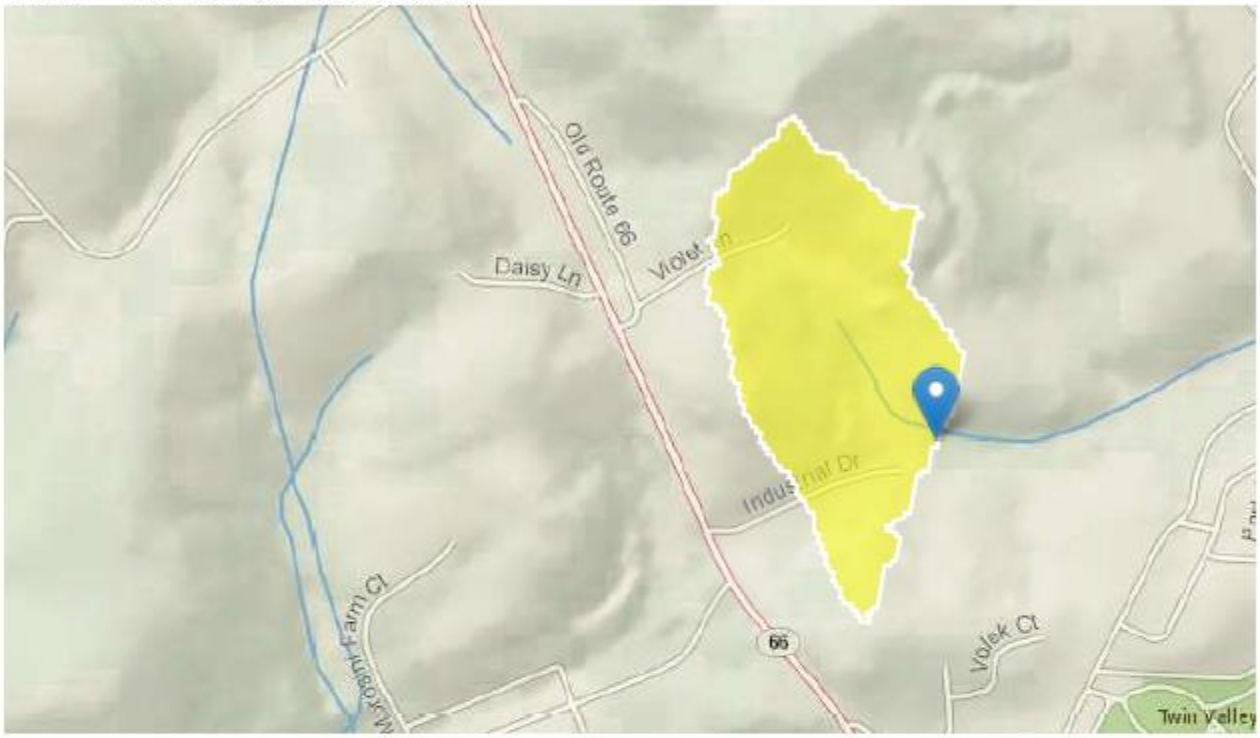
Parameter	Daily Maximum (mg/L)	Benchmark Value (mg/L)	Monitoring Frequency	Sample Type
Oil & Grease	Report	≤ 5.0	1/6 Months	Grab
5-Day Biochemical Oxygen Demand (BOD5)	Report	≤ 10	1/6 Months	Grab
Chemical Oxygen Demand (COD)	Report	≤ 30	1/6 Months	Grab
Total Suspended Solids (TSS)	Report	≤ 30	1/6 Months	Grab
Total Nitrogen	Report	≤ 2.0	1/6 Months	Grab
Total Phosphorus	Report	≤ 1.0	1/6 Months	Grab
Total Iron	Report	≤ 3.0	1/6 Months	Grab
pH (S.U.)	Report	≤ 9.0	1/6 Months	Grab
Total Zinc	Report	XXX	1/6 Months	Grab

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-001
☒	Other: USGS StreamStats (see attachment A), 2024 Integrated Report, 2022 PAG-03

Attachment A:
USGS StreamStats

PAS236107 StreamStats Report

Region ID: PA
Workspace ID: PA20240815143406825000
Clicked Point (Latitude, Longitude): 40.42680, -79.57029
Time: 2024-08-15 10:34:29 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	5.7036	degrees
DRNAREA	Area that drains to a point on a stream	0.11	square miles
ELEV	Mean Basin Elevation	1222	feet
PRECIP	Mean Annual Precipitation	41	inches

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 3]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.11	square miles	2.33	1720
ELEV	Mean Basin Elevation	1222	feet	898	2700
PRECIP	Mean Annual Precipitation	41	inches	38.7	47.9

Low-Flow Statistics Disclaimers [Low Flow Region 3]

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 3]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.00786	ft^3/s
30 Day 2 Year Low Flow	0.0122	ft^3/s
7 Day 10 Year Low Flow	0.0025	ft^3/s
30 Day 10 Year Low Flow	0.00405	ft^3/s
90 Day 10 Year Low Flow	0.00636	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/)