pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0264121**
Facility Type	**Storm Water**	APS ID	**1029694**
Major / Minor	**Minor**	Authorization ID	**1338345**

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

Applicant and Facility Information

Applicant Name	**Korns Galvanizing Company, Inc.**	Facility Name	**Korns Galvanizing Plant**
Applicant Address	75 Bridge Street	Facility Address	75 Bridge Street
	Johnstown, PA 15902-2902		Johnstown, PA 15902-2902
Applicant Contact	Barry Heider	Facility Contact	Barry Heider
Applicant Phone	(814) 535-3293	Facility Phone	(814) 535-3293
Client ID	112132	Site ID	484573
SIC Code	3479	Municipality	Johnstown City
SIC Description	Manufacturing - Metal Coating And Allied Services	County	Cambria
Date Application Received	December 31, 2020	EPA Waived?	Yes
Date Application Accepted	January 6, 2021	If No, Reason	N/A

Purpose of Application: Renewal of NPDES permit for discharge of industrial stormwater

Summary of Review

Background

Korns Galvanizing Company, Inc. (Korns) is a metal product hot-dip galvanizing facility located in Johnstown in Cambria County. A new NPDES permit was issued on June 16, 2016 and expires June 30, 2021. The renewal application was received December 31, 2020, more than 180 days prior before expiration.

In addition to the NPDES permit for stormwater coverage, Korns has a Residual Waste Operation (PAD987271921) and Captive Hazardous Waste Operation (PAD987271921) permit currently from PA DEP. The facility also has an industrial pretreatment Wastewater Discharge Permit issued in February 2010 from the Johnstown Redevelopment Authority. The POTW requires the facility to perform quarterly sampling. The POTW performs an inspection and verifies two composite samples each year.

Property and Operations

The Korns property is 2.2 acres and relatively flat. All industrial activity is performed indoors. There is no storage of equipment outdoors. The facility consists of three buildings: the warehouse, galvanizing area, and the iron foundry. Between the galvanizing area and iron foundry is a lean-to to cover the area. The galvanizing process occurs across one of two dip lines and a strip line in the galvanizing area. The lines consist of degreasing, baths, water rinses and quench baths. Ash from the process is stored in large cardboard boxes and sent out for recycling. Hazardous materials onsite include sulfuric acid, aqua ammonia, sodium hydroxide, zinc ammonium and zinc chloride.

Approve	Deny	Signatures	Date
X		Nicole H. Benoit, P.E. / Environmental Engineering Specialist	April 9, 2021
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	April 9, 2021

Summary of Review

The galvanizing area contains the wastewater treatment system (discharge to POTW) and baghouse. On the opposite end of that building is the dock, office, lab and lunchroom. At the back of the warehouse is a welding and maintenance area. The galvanizing area wastewater treatment plant is for treatment of the clean water rinse tank wastewater. This wastewater is a closed system from the stormwater and discharges to the Johnstown Regional Sewage System. The chemicals associated with the treatment plant are in diked concrete containment within the back of the galvanizing and warehouse buildings. The sludge from the filter press is stored indoors and disposed of by a third party.

Outfalls

Korns discharges their stormwater through two outfalls, 001 and 002. Both outfall drainage areas are approximately 73,000 sq. ft. and have catch basins throughout. The outfalls are inspected monthly and routine maintenance is performed as needed. Catch basins are inspected and cleared of debris routinely. The buildings are devoid of any floor drains. There have been no leaks or spills within the past five years that have reached a stormwater outfall. Both outfalls discharge at the stream bank of Stony Creek River, designated as a Warm Water Fishery (WWF) in 25 Pa. Code Chapter 93. The Stony Creek River is part of the Kiskiminetas-Conemaugh River Watershed and associated TMDL.

Outfall 001 is located at the northwest corner of the property and receives stormwater from the facility production and warehouse roofs as well as the paved parking lot from the northern half of the property. Outfall 001 also receives stormwater from the neighboring inactive Gap Vax facility. Gap Vax manufactured vacuum trucks and discharged stormwater only. The roof drains enter a manhole and flow through the underground piping to connect with the Korns pipeline to Outfall 001. Gap Vax's operations were not expected to contribute to the high zinc concentration.

Korns' Outfall 002 is located at the midpoint of the property (upstream of Outfall 001) on the western side and receives stormwater from the facility warehouse and main production area roofs, paved lot and bag house area from the southern half of the property. Both outfalls originate at the building and discharge at the end of an underground pipe network which reduces any negative thermal impacts from the primarily impervious areas of Outfall 001 and Outfall 002 drainage areas, respectively. The impervious areas are gravel and there is little vegetation at some of the perimeter areas.

Elevated Zinc Levels

As seen in the DMR summary in the Compliance History section below, both Outfall 001 and 002 have had occasional elevated zinc concentrations. Development of a SWPPP will be required to investigate the sources of zinc and identify measures that will better manage and reduce contact with stormwater. The plan will be submitted to the Department within one year following the permit effective date, and a summary of updates to the plan will be included in the Annual Stormwater Report.

Public Participation

Act 14 notifications were sent to the City of Johnstown Mayor and to the Cambria County Board of Commissioners via certified mail.

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.

Conclusion

Draft permit issuance is recommended.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	Intermittent/Variable
Latitude	40º 17' 49"	Longitude	-78º 55' 4.8"
Quad Name	Johnstown	Quad Code	1614
Wastewater Description:	Stormwater		

Outfall No.	002	Design Flow (MGD)	Intermittent/Variable
Latitude	40º 17' 47"	Longitude	-78º 55' 6"
Quad Name	Johnstown	Quad Code	1614
Wastewater Description:	Stormwater		

Receiving Waters	Stonycreek River (WWF)	Stream Code	20059
NHD Com ID	123720428	RMI	3.58 (001) 3.62 (002)
Drainage Area	454 sq. mi.	Yield (cfs/mi^2)	0.0806
Q_{7-10} Flow (cfs)	36.6	Q_{7-10} Basis	U.S.G.S. StreamStats
Elevation (ft)	1160	Slope (ft/ft)	0.0001
Watershed No.	18-E	Chapter 93 Class.	WWF
Existing Use	Not Attaining	Existing Use Qualifier	Aquatic Life
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, Low pH, Siltation (TMDL)		
Source(s) of Impairment	Abandoned Mine Drainage (TMDL)		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°F)	Ambient	Default
Hardness (mg/L)	100	Default
Other:	N/A	N/A

Nearest Downstream Public Water Supply Intake		Saltsburg Municipal Waterworks	
PWS Waters	Conemaugh River	Flow at Intake (cfs)	N/A
PWS RMI	0.5	Distance from Outfall (mi)	>50

Changes Since Last Permit Issuance: None

Compliance History	
Summary of DMRs:	The permittee was required to monitor and report once monthly sample results at both Outfall 001 and 002. Currently there are no numeric effluent limitations imposed. Both outfalls have the same list of pollutants in Part A of the permit. The facility has had several late DMR submissions during the past five years.
Summary of Inspections:	The most recent inspection was conducted on December 8, 2017. No violations were identified during the inspection. It was observed that the pH was elevated greater than 9.0 S.U. at both outfalls in 2017 during several reporting periods. During the past twelve months of reporting in 2020-2021 the pH did exceed 9.0 at Outfall 002 in April 2020.

Compliance History

DMR Data for Outfall 001 (from March 1, 2020 to February 28, 2021)

Parameter	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20
Flow (MGD) Daily Maximum	0.00576	0.00144	0.00288	0.0072	0.00144	0.00072	0.00072	0.00036	0.00144	0.004	0.001	0.00144
pH (S.U.) Daily Maximum	6.99	6.9	7.71	8.33	8.5	7.6	7.6	7.60	7.6	6.96	7.44	7.16
TSS (mg/L) Daily Maximum	3.0	< 2	7	18.0	< 2.0	< 2	4	2	9	22	3	6
Oil and Grease (mg/L) Daily Maximum	< 5.0	< 5	< 5	< 5.0	< 5.0	< 5	< 5	< 6	< 5	< 5	< 5	< 5
Total Aluminum (mg/L) Daily Maximum	< 0.1	< 0.1	0.2	0.2	< 0.1	< 0.1	0.1	< 0.1	< 0.1	0.4	0.1	< 0.1
Total Copper (mg/L) Daily Maximum	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01
Total Iron (mg/L) Daily Maximum	0.24	0.07	0.36	0.56	0.17	0.31	0.46	0.31	0.25	0.51	0.15	0.57
Total Manganese (mg/L) Daily Maximum	0.05	0.04	0.05	0.05	0.04	0.17	0.12	0.13	0.21	0.12	0.1	0.03
Total Zinc (mg/L) Daily Maximum	0.05	2.67	2.27	0.05	0.02	0.1	0.24	0.24	5.81	1.62	2.39	4.40

DMR Data for Outfall 002 (from March 1, 2020 to February 28, 2021)

Parameter	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20
Flow (MGD) Daily Maximum	0.00144	0.00576	0.0072	0.014	0.00216	0.00144	0.00057 6	0.00072	0.00432	0.008	0.006	0.0072
pH (S.U.) Daily Maximum	7.17	7.06	7.7	8.81	8.66	7.14	7.60	7.60	7.83	7.71	9.16	7.44
TSS (mg/L) Daily Maximum	5.0	< 2	< 2	41.0	< 2.0	2	3	4	5	2	2	16
Oil and Grease (mg/L) Daily Maximum	< 5.0	< 5	< 5	< 5.0	< 5.0	< 5	< 5	< 6	< 5	< 5	< 5	< 5
Total Aluminum (mg/L) Daily Maximum	< 0.1	0.1	< 0.1	0.6	< 0.1	< 0.1	0.2	< 0.1	< 0.1	0.1	0.1	0.7

Total Copper (mg/L) Daily Maximum	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total Iron (mg/L) Daily Maximum	0.2	0.31	0.23	1.70	0.2	0.36	0.35	0.62	2.84	0.15	0.22	1.10
Total Manganese (mg/L) Daily Maximum	0.04	0.18	0.06	0.12	0.04	0.17	0.09	0.17	0.07	0.03	0.07	0.10
Total Zinc (mg/L) Daily Maximum	2.11	0.06	0.07	0.09	0.02	0.1	0.22	0.27	0.17	0.05	0.02	0.07

Development of Effluent Limitations

Outfall No.	001	**Design Flow (MGD)**	0
Latitude	40º 17' 49"	**Longitude**	-78º 55' 4.8"

Wastewater Description: Stormwater

Technology-Based Limitations

Department guidance states "Where a General Permit exists for the industrial sector, the effluent limits and monitoring requirements should generally be considered minimum standards for discharges from that industry, unless the application manager can document that the requirements of the General Permit are not applicable to a specific individual permit...The applicable appendix of the PAG-03 General Permit should be considered the minimum standards for limits, benchmarks and monitoring requirements for individual industrial stormwater permits. The application manager may include other limits, benchmarks and monitoring requirements as justified in the fact sheet." The facility's SIC Code of 3479 – *Coating, Engraving and Allied Services, Not Elsewhere Classified* is covered under Appendix U of the PAG-03 General Permit for "Fabricated Metal Products, Except Machinery and Transportation Equipment, and Coating, Engraving, and Allied Services." The following parameters are required to be sampled as part of Appendix U: pH, TSS, nitrate and nitrite-nitrogen, aluminum, iron and zinc. TSS has a benchmark value of 100 mg/L. The maximum reported TSS during the previous twelve months at Outfall 001 was 22 mg/L.

Department guidance recommends establishing "pH requirements of 6.0 (minimum) and 9.0 S.U. (maximum) for all industrial waste process and non-process discharges (see 25 Pa. Code §§ 92a.48(a)(2) and 95.2), unless the application manager determines there is no potential for the facility's operations to affect the pH of influent (source) waters. Consider applying these requirements for industrial stormwater discharges where control of effluent pH is desired (e.g., stormwater discharges from concrete batch facilities). A maximum limit exceeding 9.0 S.U. may be granted in certain cases in accordance with 25 Pa. Code § 95.2(1)." The facility has had a history of exceeding 9.0 S.U. at Outfall 001, particularly as noted in the 2017 inspection report. Therefore, an instantaneous maximum (IMAX) of 9.0 S.U. will be imposed.

The Department's guidance also states "Application managers will consider, where appropriate, applying treatment standards contained in Chapter 95." pH is addressed above. Oil and grease has been below detection and so no effluent limitation will be imposed. Additionally, there is no expectation of elevated total dissolved solids (TDS) or dissolved iron so no monitoring of those parameters will be imposed.

Water Quality-Based Limitations

The Stoney Creek River is a part of the Kiskiminetas-Conemaugh River Watershed TMDL. The facility was not provided an individual WLA. The maximum concentration reported on the DMRs in the past twelve months for iron, aluminum and manganese was 0.57 mg/L, 0.4 mg/L and 0.21 mg/L, respectively. The maximum reported in the renewal application was 1.17 mg/L, 0.951 mg/L and 0.168 mg/L. These concentrations are generally less than the water quality criteria of 1.5 m/gL iron, 0.75 mg/L aluminum and 1.0 mg/L manganese. Aluminum exceeded the criterion in the one renewal sample but no the routine DMR sampling. There is no reasonable expectation that the facility's stormwater will negatively contribute towards the TMDL pollutant loading for these parameters, and so imposition of the criteria as limits will not be necessary. Monitoring of the pollutants will continue.

The Department's guidance states "In general, if actual stormwater concentrations exceed 100 times the most stringent Chapter 93 criterion (or a lesser amount for large industrial areas that drain to small streams), or exceed 100 mg/L for pollutants without criteria, the application manager should consider applying effluent limits for the applicable parameters and/or the implementation of BMPs with compliance schedules as necessary to achieve the limits or otherwise reduce stormwater concentrations."

Zinc is listed as a toxic pollutant in 25 Pa. Code § 93.8c, Table 5 with a Criteria Continuous and Criteria Maximum Concentration of 120 ug/L at a stream hardness of 100 mg/L. There is no established Human Health Criteria. The criteria multiplied by 100 is 12 mg/L. In the renewal sampling the zinc concentration was 0.0709 mg/L, but the maximum concentration during the past twelve months of DMR sampling was 5.81 mg/L.

A zinc effluent limitation will not be imposed at this time, but a Pollutant Reduction Report will be required in Part C of the renewed permit to reduce the concentration of zinc at the outfalls through use of Best Management Practices (BMPs) and tracing of the zinc migration through the facility to the stormwater inlets. The permittee will be provided one year to conduct the investigation and effectiveness measures and submit the report to the Department.

Anti-Backsliding

The current permit did not impose any effluent limitations, only monitoring. Therefore, anti-backsliding is not applicable.

Copper has not been detected in the discharge and is not a pollutant of concern in the PAG-03 Appendix U. Monitoring will no longer be required.

The monthly sampling frequency and grab sample type will continue to apply.

Development of Effluent Limitations

Outfall No.	002	**Design Flow (MGD)**	0
Latitude	40º 17' 47"	**Longitude**	-78º 55' 6"

Wastewater Description: Stormwater

See the Outfall 001 description above for background on the Department Guidance and methodology for permit renewal.

Technology-Based Limitations

The following parameters will be required to be sampled as they are a part of the PAG-03 permit Appendix U: pH, TSS, nitrate and nitrite-nitrogen, aluminum, iron and zinc. TSS has a benchmark value of 100 mg/L. The maximum reported TSS during the previous twelve months at Outfall 002 was 41.0 mg/L.

The facility has had a history of exceeding 9.0 S.U. at Outfall 002, as noted in the 2017 inspection report and the April 2020 DMR sample. Therefore, an instantaneous maximum (IMAX) of 9.0 S.U. will be imposed. Oil and grease has been below detection and so no effluent limitation will be imposed. Additionally, there is no expectation of elevated total dissolved solids (TDS) or dissolved iron so no monitoring of those parameters will be imposed.

Water Quality-Based Limitations

The maximum concentration reported on the DMRs in the past twelve months for iron, aluminum and manganese was 2.84 mg/L, 0.7 mg/L and 0.18 mg/L, respectively. The maximum reported in the renewal application was 0.524 mg/L, 0.0644 mg/L and 0.0332 mg/L. These concentrations are generally less than the water quality criteria of 1.5 m/gL iron, 0.75 mg/L aluminum and 1.0 mg/L manganese. Iron exceeded the criterion in two of the routine DMR samples during the past twelve months, but on average was 0.7 mg/L. There is no reasonable expectation that the facility's stormwater will negatively contribute towards the TMDL pollutant loading for these parameters, particularly since discharge is only during infrequent precipitation events, and so imposition of the criteria as limits will not be necessary. Monitoring of the pollutants will continue.

In the renewal sampling the zinc concentration was 4.62 mg/L, but the maximum concentration during the past twelve months of DMR sampling was 2.11 mg/L.

Anti-Backsliding

The current permit did not impose any effluent limitations, only monitoring. Therefore, anti-backsliding is not applicable.

Copper has not been detected in the discharge and is not a pollutant of concern in the PAG-03 Appendix U. Monitoring will no longer be required.

The monthly sampling frequency and grab sample type will continue to apply.

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) and/or BPJ.

Outfall 001 and 002, 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	Daily Maximum	Minimum	Daily Maximum	Maximum	Instant. Maximum		
Flow (MGD)	XXX	Report	XXX	XXX	XXX	XXX	1/month	Estimate
pH (S.U.)	XXX	XXX	XXX	XXX	XXX	9.0	1/month	Grab
Total Suspended Solids	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Oil and Grease	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Aluminum, Total	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Nitrate and Nitrite-Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Iron, Total	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Manganese, Total	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Zinc, Total	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab

Compliance Sampling Location: End of Outfall Pipe

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: New and Reissuance Industrial Waste and Industrial Stormwater Individual NPDES Permit Applications, BPNPSM-PMT-001, 11/12, Revised 10/13.
☒	SOP: Establishing Effluent Limitations for Individual Industrial Permits, BPNPSM-PMT-032, 10/20.
☐	Other:

Chapter 93.8c Table 5 for Toxic Substances

TABLE 5

WATER QUALITY CRITERIA FOR TOXIC SUBSTANCES

Fish and Aquatic Life Criteria

PP NO	*Chemical Name*	*CAS Number*	*Criteria Continuous Concentrations (ug/L)*	*Criteria Maximum Concentration (ug/L)*	*Human Health Criteria (ug/L)*	
1M	ANTIMONY	07440360	220	1100	5.6 †	H
2M	ARSENIC	07440382	150 (As3+)	340 (As3+)	10	H
3M	BERYLLIUM	07440417	N/A	N/A	N/A	-
4M	CADMIUM	07440439	*{1.101672-(ln[H]×0.041838)}× Exp(0.7409×ln[H]-4.719) (ex: @H=100, CCC=0.25)	*{1.136672-(ln[H]×0.041838)} × Exp(1.0166×ln[H]-3.924) (ex: @H=100, CMC=2.0)	N/A	-
5M	CHROMIUM III	16065831	*0.860×Exp(0.819×ln[H]+0.6848) (ex: @H=100, CCC=74)	*0.316×Exp(0.819×ln[H]+3.7256) (ex: @H=100, CMC=570)	N/A	-
5M	CHROMIUM VI	18540299	*11	*16	N/A	-
6M	COPPER	07440508	*0.960×Exp(0.8545×ln[H]-1.702) (ex: @H=100, CCC=9.0)	*0.960×Exp(0.9422×ln[H]-1.700) (ex: @H=100, CMC=13)	N/A	-
7M	LEAD	07439921	*{1.46203-(ln[H] ×0.145712)} × Exp(1.273×ln[H]-4.705) (ex: @H=100, CCC=2.5)	*{1.46203-(ln[H]×0.145712)} × Exp(1.273×ln[H]-1.460) (ex: @H=100, CMC=65)	N/A	-

Fish and Aquatic Life Criteria

PP NO	Chemical Name	CAS Number	Criteria Continuous Concentrations (ug/L)	Criteria Maximum Concentration (ug/L)	Human Health Criteria (ug/L)	
8M	MERCURY	07439976	*0.77 (Hg2+)	*1.4 (Hg2+)	0.05	H
9M	NICKEL	07440020	*0.997×Exp(0.846×ln[H]+0.0584) (ex: @H=100, CCC=52)	*0.998×Exp(0.846×ln[H]+2.255) (ex: @H=100, CMC=470)	610 †	H
10M	SELENIUM	07782492	*4.6	N/A	N/A	-
11M	SILVER	07440224	N/A	*0.850×Exp(1.72×ln[H]-6.590) (ex: @H=100, CMC=3.2)	N/A	-
12M	THALLIUM	07440280	13	65	0.24 †	H
13M	ZINC	07440666	*0.986×Exp(0.8473×ln[H]+0.884) (ex: @H=100, CCC=120)	*0.978×Exp(0.8473×ln[H]+0.884) (ex: @H=100, CMC=120)	N/A	-
14M	CYANIDE, FREE	00057125	5.2	22	4	H
1A	2-CHLOROPHENOL	00095578	110	560	30	H
2A	2,4-DICHLOROPHENOL	00120832	340	1700	10	H
3A	2,4-DIMETHYLPHENOL	00105679	130	660	100	H
4A	4,6-DINITRO-o-CRESOL (2 METHYL-4,6-DINITROPHENOL)	00534521	16	80	2	H
5A	2,4-DINITROPHENOL	00051285	130	660	10	H

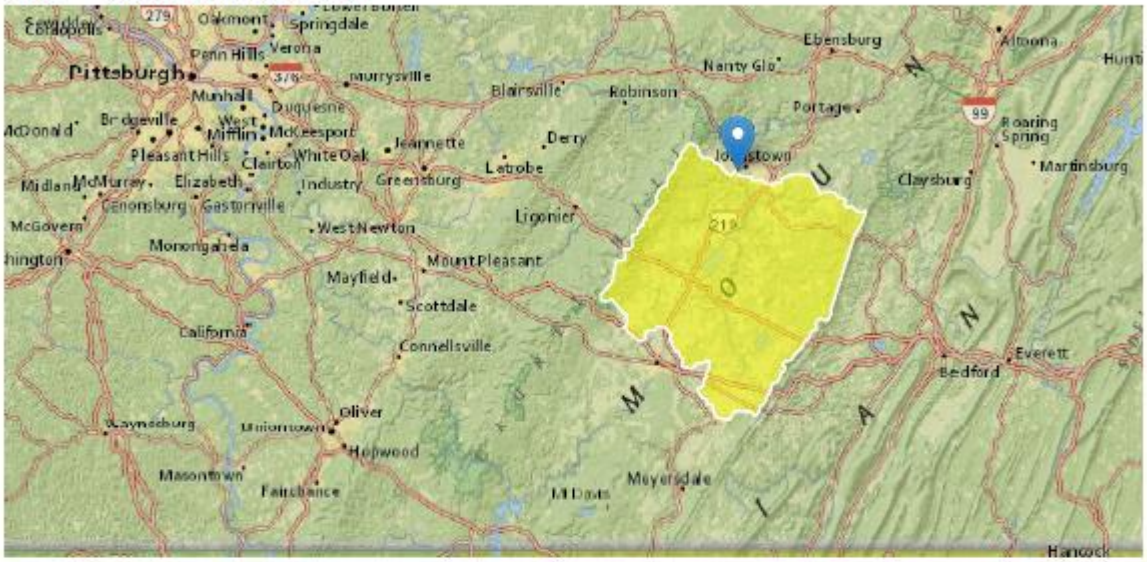
Chapter 93 Designation

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
6—Unnamed Tributaries to Stony Creek	Basins, Beaverdam Creek to Quemahoning Creek	Somerset	CWF	None
6—Oven Run	Basin	Somerset	CWF	None
6—Fallen Timber Run	Basin	Somerset	CWF	None
6—Quemahoning Creek	Main Stem	Somerset	CWF	None
7—Unnamed Tributaries to Quemahoning Creek	Basins	Somerset	CWF	None
7—North Branch Quemahoning Creek	Main Stem	Somerset	CWF	None
8—Unnamed Tributaries to North Branch Quemahoning Creek	Basins	Somerset	CWF	None
8—Horner Run	Basin	Somerset	CWF	None
8—Beams Run	Basin	Somerset	CWF	None
8—Spruce Run	Basin	Somerset	HQ-CWF	None
8—Beaverdam Run	Basin	Somerset	CWF	None
7—Beaverdam Creek	Basin	Somerset	HQ-CWF	None
7—Roaring Run	Basin, Source to Boswell Municipal Authority Dam	Somerset	EV	None
7—Roaring Run	Basin, Boswell Municipal Authority Dam to Mouth	Somerset	CWF	None
7—Twomile Run	Basin	Somerset	CWF	None
7—Higgins Run	Basin Source to RM 1.37	Somerset	CWF	None
7—Higgins Run	Main Stem, RM 1.37 to Mouth	Somerset	HQ-CWF	None
8—Unnamed Tributaries to Higgins Run	Basins, RM 1.37 to Mouth	Somerset	CWF	None
5—Stony Creek	Main Stem, Quemahoning Creek to Confluence with Little Conemaugh River	Cambria	WWF	None

U.S.G.S Stream Stats

StreamStats Report

Region ID: PA
Workspace ID: PA20210401052754851000
Clicked Point (Latitude, Longitude): 40.29665, -78.91855
Time: 2021-04-01 01:28:12 -0400



Korns Galvanizing Plant PA0264121

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	454	square miles
ELEV	Mean Basin Elevation	2158	feet
PRECIP	Mean Annual Precipitation	43	inches

Low-Flow Statistics Parameters [99.9 Percent (453 square miles) Low Flow Region 3]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	454	square miles	2.33	1720
ELEV	Mean Basin Elevation	2158	feet	898	2700
PRECIP	Mean Annual Precipitation	43	inches	38.7	47.9

Low-Flow Statistics Flow Report [99.9 Percent (453 square miles) Low Flow Region 3]

PII: Prediction Interval-Lower, PIu: 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	66.3	ft^3/s	43	43
30 Day 2 Year Low Flow	86.3	ft^3/s	38	38

Statistic	Value	Unit	SE	SEp
7 Day 10 Year Low Flow	36.6	ft^3/s	54	54
30 Day 10 Year Low Flow	44.7	ft^3/s	49	49
90 Day 10 Year Low Flow	62.7	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: 4.5.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.0