Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0219339**
Facility Type	**Industrial**	APS ID	**1101912**
Major / Minor	**Minor**	Authorization ID	**1463636**

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

Applicant and Facility Information

Applicant Name	**D & B Gas Production LLC**	Facility Name	**Jones Treatment Plant**
Applicant Address	233 North Park Drive	Facility Address	Howard Road
	Kittanning, PA 16201		Blairsville, PA 15717
Applicant Contact	Paul Kimmell	Facility Contact	
Applicant Phone	(724) 543-5743 (p.kimmell@blxinc.net)	Facility Phone	
Client ID	349284	Site ID	605220
SIC Code	1389	Municipality	Black Lick Township
SIC Description	Mining - Oil and Gas Field Services, Nec	County	Indiana
Date Application Received	November 9, 2023	EPA Waived?	No
Date Application Accepted	March 4, 2024	If No, Reason	O&G wastewater

Purpose of Application: Renewal of a NPDES Permit for an existing discharge of industrial waste

Summary of Review

This facility is an existing passive water treatment facility of coalbed methane wastewater. The wastewater is generated by the production of coalbed methane gas from a field of 43 coalbed methane wells. The gas is extracted by dewatering the coal seams with the use of pump jacks which remove the water from the wells, known as coalbed methane connate water ("connate"). The connate is then pumped underground through a pipeline system to the water treatment facility prior to discharge.

Since this permit was last issued, the NPDES and WQM Permit were transferred from Fate Ventures, LLC to D & B Gas Production LLC on October 23, 2020. Subsequently, the system has not been in operation due to need maintenance since 2020, so there have been zero discharges reported.

There are currently 112 open violations listed in EFACTS for this client (10/30/2025).

Public Participation

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

Approve	Deny	Signatures	Date
X		Adam J. Pesek Adam J. Pesek, E.I.T. / Project Manager	October 30, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	November 12, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.012 (max daily)
Latitude	40º 27' 55.06"	Longitude	-79º 17' 37.07"
Quad Name	Blairsville	Quad Code	1511
Wastewater Description:	Treated Connate		
Receiving Waters	Blacklick Creek (TSF)	Stream Code	43979
NHD Com ID	123714694	RMI	2.2900
Drainage Area	410	Yield (cfs/mi^2)	0.081
Q_{7-10} Flow (cfs)	33.4	Q_{7-10} Basis	USGS Streamstats
Elevation (ft)	908	Slope (ft/ft)	0.0001
Watershed No.	18-D	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	METALS		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)	8.1	9/23/2024 upstream sample taken by the Department
Temperature (°F)		
Hardness (mg/L)	100	Default
Other:		

Nearest Downstream Public Water Supply Intake		Saltsburg Municipal Waterworks	
PWS Waters	Conemaugh River	Flow at Intake (cfs)	136
PWS RMI	0.66	Distance from Outfall (mi)	18.18

Changes Since Last Permit Issuance: Plant flows have dramatically declined since the startup of the plant, which was designed for 0.6 MGD. Current projected flows are 0.0029 MGD as an average during production and 0.012 MGD as a maximum during production.

Other Comments:

Treatment Facility Summary

Treatment Facility Name: Jones TP

WQM Permit No.	Issuance Date
3202201 T-3	10/23/2020

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Industrial	Primary	Settling	N/A	0.6

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.6	---	N/A	N/A	Landfill

Changes Since Last Permit Issuance:

Other Comments: Treatment consists of two U-shaped settling basins in series. There are no chemical additives, no aeration, and no filtration. The influent flows into the first collection pond which has a treatment capacity of 156,000 gallons with an additional 2 feet of freeboard capacity of 250,000 gallons. The water migrates through the first pond and dumps into a second pond, which has a treatment capacity of 158,000 gallons with an additional 2 feet of freeboard capacity of 267,000 gallons. Total Treatment Capacity is 314,000 gallons. When necessary solid residue is removed from the ponds and sent to approved landfills.

Compliance History	
Summary of DMRs:	There has not been a discharge since June 2020. Therefore, no evaluation was done.
Summary of Inspections:	A compliance inspection was last conducted on 3/10/2023. The inspection report did not note any violations.

Other Comments: **A Notice of Violation was issued on 8/31/2021 for failure to pay the permit annual fee.**

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.012
Latitude 40º 27' 55.06" **Longitude** -79º 17' 37.07"
Wastewater Description: Treated Connate

Current Permit Effluent Limitations

Parameters	Average Monthly (lbs/day)	Daily Maximum (lbs/day)	Minimum (mg/L)	Average Monthly (mg/L)	Daily Maximum (mg/L)	Measurement Frequency	Sample Type
Flow (MGD)	Report	0.6	XXX	XXX	XXX	1/day	Measured
Total Aluminum	XXX	XXX	XXX	0.75	0.75	1/week	24-Hr Composite
Total Iron	XXX	XXX	XXX	1.5	3.0	1/week	24-Hr Composite
Total Manganese	XXX	XXX	XXX	1.0	2.0	1/week	24-Hr Composite
Total Suspended Solids	XXX	XXX	XXX	30	60	2/month	Grab
Total Dissolved Solids	Report	Report	XXX	Report	Report	2/month	Grab
Bromide	Report	Report	XXX	Report	Report	2/month	Grab
Chloride	Report	Report	XXX	Report	Report	2/month	Grab
Sulfate	Report	Report	XXX	Report	Report	2/month	Grab
Osmotic Pressure (mOs/kg)	XXX	XXX	XXX	204	319	2/month	Grab
Oil and Grease	XXX	XXX	XXX	15	30	2/month	Grab
Total Acidity	XXX	XXX	XXX	Report	Report	2/month	Grab
Total Alkalinity	XXX	XXX	XXX	Report	Report	2/month	Grab
Alkalinity (Effluent Net)	XXX	XXX	0.0	XXX	XXX	2/month	Grab
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	2/month	Grab

Technology-Based Limitations

While this facility does collect and treat connate from multiple wells it is not a centralized waste treatment facility subject to the effluent limit guideline ("ELG") 40 CFR 437. The applicability section of the ELG, 40 CFR 437.1(b), states, "This part does not apply to the following discharges of wastewater from a CWT facility: … (3) Wastewater from the treatment of wastes received from off-site via conduit (e.g., pipelines, channels, ditches, trenches, etc.) from the facility that generates the wastes unless the resulting wastewaters are commingled with other wastewaters subject to this provision." In this case the connate is being generated at the well and then delivered via a conduit (pipelines) to the treatment facility where it is processed and discharged.

Outfall 001 is no longer subject to 40 CFR 435, the Oil and Gas Extraction Point Source discharge ELG as EPA has not promulgated effluent limitation guidelines and standards for pollutant discharges from coalbed methane extraction facilities. EPA had initiated a coalbed methane rulemaking but announced its decision to discontinue this effort in Fall 2014.

The production water is subject to the provisions in the oil & gas wastewater permitting manual ("OGPM").

The OGPM stipulates technology based effluent limitations as least as stringent as the following:

Parameter	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Maximum
Total Suspended Solids (mg/L)	-	30	60	75	-
Oil and Grease (mg/L)	-	15	30	-	-
Iron, Total (mg/L)	-	3.5	7.0	9.0	-
Acidity (mg/L)	-	Less than Alkalinity*			-
pH (s.u.)	6	-	-		9

Table 1: Technology based effluent limitations from the Oil & Gas Wastewater Permitting Manual

*Due to the nature of the limit, in the Draft Permit monitoring for Acidity and Alkalinity will be imposed as well as Effluent Net Alkalinity. The Effluent Net Alkalinity will have a minimum limit of 0.0 mg/L, that way any time the Net Alkalinity value is a positive number, the facility is in compliance. Effluent Net Alkalinity is the difference between the Acidity and Alkalinity

This facility is also subject to the effluent standards for Total Dissolved Solids (TDS) set forth in PA Code Chapter 95.10. This facility is not considered a new or expanding mass load as it was an authorized discharge prior to August 21, 2010. The previously calculated average and maximum loadings are shown in table 2, below. They will be included as a special condition in the permit. If the permittee discharges over this loading it will be considered an expanding load and must be reevaluated under Chapter 95.10. Osmotic pressure is also a pollutant of concern, but because TDS and osmotic pressure are different ways of expressing the presence of the same pollutant, dissolved salts, a technology based effluent limitation for osmotic pressure will not be developed.

Parameter	Average Monthly	Maximum Daily
Total Dissolved Solids (lbs/day)	1,731	29,524

Table 2: Authorized TDS loading.

The discharge is subject to the effluent standards for industrial wastes in 25 PA Code Chapter 95.2 (1, 2 and 4) for pH, oil & grease, and dissolved iron. These are shown in table 3, below. Because there is a total iron limit with a maximum of 7 also applicable to the discharge the dissolved iron limit is not necessary and will not be imposed.

Parameter	Minimum	Average Monthly	Daily Maximum	Maximum
Oil and Grease (mg/L)	-	15	30	
Iron, dissolved (mg/L)	-	-	7.0	
pH (s.u.)	6	-	-	9

Table 3: Effluent standards from 25 PA Code Chapter 95.2

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
None			

Comments: No limits or monitoring were determined as a result of toxics modeling.

Previously, TDS and its major constituents including sulfate, chloride, bromide had emerged as pollutants of concern in several major watersheds in the Commonwealth. The conservative nature of these solids allows them to accumulate in surface waters and they may remain a concern even if the immediate downstream public water supply is not directly impacted. Bromide has been linked to formation of disinfection byproducts at increased levels in public water systems. In addition, as a consequence of actions associated with Triennial Review 13, the Environmental Quality Board had directed DEP to collect additional data related to sulfate, chloride, and 1,4-dioxane. Under a monitoring initiative that was in effect at the time of the previous permit renewal, monitoring was placed in the permit for sulfate, chloride, and bromide.

Since that time, the Department collected enough data and is no longer requiring certain facilities to collect this data. In addition, this facility's average flow rated dramatically decreased, thus putting them under the threshold of the previous monitoring initiative. Therefore, monitoring for chloride, total sulfate, and bromide will be removed from the proposed renewed permit.

Total Maximum Daily Loads

Wastewater discharges from Jones are located within the Kiskiminetas-Conemaugh River Watersheds for which the Department has developed a TMDL. 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. Derry's permit, PA0219339, is listed in the Appendix G of the Kiskiminetas-Conemaugh River Watershed TMDL, requiring load allocations and is displayed below in Table 4. 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 a watershed allocation. TMDLs prescribe allocations that minimally achieve water quality criteria (i.e., 100 percent use of a stream's assimilative capacity).

Table 4: Kiskiminetas-Conemaugh River Watershed TMDL PA0218898 Load Allocations

Kiskiminetas River Watershed Major Non-Mining Wasteload Allocations

Region	SWS	PERMIT	PIPE	Metal	Baseline Load (lbs/yr)	Baseline Concentration (mg/L)	Allocated Load (lbs/yr)	Allocated Concentration (mg/L)	% Reduction	Comments
4	4002	PA0219339	001	Aluminum	1,371	0.75	1,371	0.75	0	
4	4002	PA0219339	001	Iron	6,398	3.50	2,742	1.50	57	
4	4002	PA0219339	001	Manganese	1,828	1.00	1,828	1.00	0	

Applicable water quality criteria for the TMDL watershed are imposed as effluent limits are shown in Table 5.

Aluminum: The specific water quality criterion for aluminum is expressed as an acute or maximum daily in 25 Pa. Code Chapter 93. Discharges of aluminum may only be authorized to the extent that they will not cause or contribute to any violation of the water quality standards. Therefore, the water quality criterion for aluminum (0.75 mg/L) is imposed as a maximum daily effluent limit (MDL). Whenever the most stringent criterion is selected for the MDL, the Department should also impose an average monthly limit (AML) and instantaneous maximum limit (IMAX) if applicable. The imposition of an AML that is more stringent than the MDL is typically not appropriate because the water quality concerns have already been fully addressed by setting the MDL equal to the most stringent applicable criterion. Therefore, where the MDL is set at the value of the most stringent applicable criterion, the AML should be set equal to the MDL. Accordingly, TMDL aluminum limits are proposed for Outfall 001.

Iron: The specific water quality criterion for iron is expressed as a 30-day average of 1.5 $^{mg}/_{L}$ in 25 Pa. Code § 93.7(a). The criterion is based on the protection of aquatic life and is associated with chronic exposure. There are no other criteria for total iron. Since the duration of the total iron criterion coincides with the 30-day duration of the AML, the 30-day average criterion for total iron is set equal to the AML. In addition, because the total iron criterion is associated with chronic exposure, the MDL (representing acute exposure) and the IMAX may be made less stringent according to established procedures described in Section III.C.3.h on Page 13 of the Water Quality Toxics Management Strategy (Doc. # 361-0100-003). These procedures state that a MDL and IMAX may be set at 2 times and 2.5 times the AML, respectively, or there is the option to use multipliers from EPA's Technical Support Document for Water Quality-based Toxics Control, if data are available to support the use of alternative multipliers. Accordingly, TMDL iron limits are proposed for Outfall 001.

Manganese: The specific water quality criterion for manganese is expressed as an acute or maximum daily of 1.0 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of human health and is associated with chronic exposure associated with a potable water supply (PWS). Since no duration is given in Chapter 93 for the manganese criterion, a duration of 30 days is used based on the water quality criteria duration for Threshold Human Health (THH) criteria given in Section III.C.3.a., Table 1 on Page 10 of DEP's Water Quality Toxics Management Strategy. The 30-day duration for THH criteria coincides with the 30-day duration of an AML, which is why the manganese criterion is set equal to the AML for a "permitting at criteria" scenario. Because the manganese criterion is interpreted as having chronic exposure, the manganese MDL and IMAX may be made less stringent according to procedures established in Section III.C.2.h. of the Water Quality Toxics Management Strategy (AML multipliers of 2.0 and 2.5 for the MDL and IMAX respectively). Accordingly, TMDL manganese limits are proposed for Outfall 001.

Table 5: Kiskiminetas-Conemaugh River Watersheds TMDL Limits

Parameter	Allocated Load (lbs/yr)	TMDL Limits (mg/L)	
		Average Monthly	Daily Maximum
Aluminum, total	1,371	0.75	0.75
Iron, total	2,742	1.5	3.0
Manganese, total	1,828	1.0	2.0

In this case, aluminum, iron and manganese limits were imposed in order to ensure compliance with the TMDL.

Best Professional Judgment (BPJ) Limitations

Comments: None

Additional Considerations

Annual monitoring for PFAS parameters – PFOA, PFOS, PFBS, and HFPO-DA –was added to the renewed permit in accordance with Department directive under the authority of Chapter 92a.51. A footnote was also added to the proposed permit for the discontinuation of sampling requirements for PFAS parameters after four consecutive non-detects are reported for all parameters at or below the Target QLs.

Flow monitoring will be required in accordance with 25 Pa. Code § 92a.61(b).

Anti-Backsliding

The current NPDES Permit has WQBELs for osmotic pressure. Toxics modeling done for this renewal did not determine reasonable potential for effluent limits or the need for monitoring so the existing limits will be removed from the proposed renewed NPDES Permit.

Removal of the limit is permissible under 402(o)(1) of the CWA based on compliance with 303(d)(4)(B) – Attainment Water. Compliance with 303(d)(4)(B) is being met because the receiving stream – BlacklickCreek, is not impaired due to osmotic pressure and the backsliding of the effluent limits is consistent with PADEP's antidegradation policy located in 25 Pa. Code Chapter 93.4(a). The removal of effluent limits is meeting state antidegradation requirements because instream water uses are not impaired due to osmotic pressure and applicable state water quality standards for osmotic pressure in 25 Pa. Code Chapter 93.7 does not have reasonable potential, as was demonstrated in the Toxics Management Spreadsheet that was done for this permit renewal.

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	Daily Maximum	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	0.6	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	XXX	2/month	Grab
TSS	XXX	XXX	XXX	30	60	XXX	2/month	Grab
Total Dissolved Solids	Report	Report	XXX	Report	Report	XXX	2/month	Grab
Oil and Grease	XXX	XXX	XXX	15	30	XXX	2/month	Grab
Total Acidity	XXX	XXX	XXX	Report	Report	XXX	2/month	Grab
Total Alkalinity	XXX	XXX	XXX	Report	Report	XXX	2/month	Grab
Total Alkalinity Effluent Net	XXX	XXX	0.0	XXX	XXX	XXX	2/month	Calculation
Total Aluminum	XXX	XXX	XXX	0.75	0.75	XXX	1/week	Grab
Total Iron	XXX	XXX	XXX	1.5	3.0	XXX	1/week	Grab
Total Manganese	XXX	XXX	XXX	1.0	2.0	XXX	1/week	Grab
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001 (prior to mixing with any other waters)
Other Comments:

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Jones Treatment Plant** NPDES Permit No.: **PA0219339** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Connate Water**

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
0.012	152	8.3						

					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		3340									
	Chloride (PWS)	mg/L		1840									
	Bromide	mg/L		13.2									
	Sulfate (PWS)	mg/L		14									
	Fluoride (PWS)	mg/L		0.295									
Group 2	Total Aluminum	µg/L		32									
	Total Antimony	µg/L	<	0.4									
	Total Arsenic	µg/L	<	10									
	Total Barium	µg/L		8470									
	Total Beryllium	µg/L	<	0.4									
	Total Boron	µg/L	<	250									
	Total Cadmium	µg/L	<	0.4									
	Total Chromium (III)	µg/L	<	5									
	Hexavalent Chromium	µg/L	<	0.1									
	Total Cobalt	µg/L	<	1									
	Total Copper	µg/L	<	2									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<	5									
	Dissolved Iron	µg/L	<	20									
	Total Iron	µg/L		161									
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L		63									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L	<	5									
	Total Phenols (Phenolics) (PWS)	µg/L	<	5									
	Total Selenium	µg/L	<	20									
	Total Silver	µg/L	<	5									
	Total Thallium	µg/L	<	10									
	Total Zinc	µg/L	<	4									
	Total Molybdenum	µg/L	<	5									
	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		20.2									
	Total Beta	pCi/L		7.89									
	Radium 226/228	pCi/L		9.75									
	Total Strontium	µg/L		3880									
	Total Uranium	µg/L	<	0.323									
	Osmotic Pressure	mOs/kg		87									

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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Jones Treatment Plant, NPDES Permit No. PA0219339, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Blacklick Creek**

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	043979	18.18	908	410	0.0001		Yes
End of Reach 1	043832	0	828	1370		1	Yes

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

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	18.18	0.081										100	8.1		
End of Reach 1	0	0.081	136												

Q_h

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	18.18														
End of Reach 1	0														

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Jones Treatment Plant, NPDES Permit No. PA0219339, Outfall 001

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

☑ ***Hydrodynamics***

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

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
18.18	33.21		33.21	0.019	0.0001	1.056	109.5	103.742	0.287	3.864	1513.853
0	136.00	1.547	134.453								

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
18.18	158.70		158.70	0.019	0.0001	2.1	109.5	52.137	0.69	1.61	539.822
0	544.129	1.547	542.58								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.100 Analysis Hardness (mg/l): 100.29 Analysis pH: 8.10

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	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	134,306	
Total Antimony	0	0		0	1,100	1,100	196,982	
Total Arsenic	0	0		0	340	340	60,885	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	3,760,559	
Total Boron	0	0		0	8,100	8,100	1,450,501	
Total Cadmium	0	0		0	2.019	2.14	383	Chem Translator of 0.944 applied
Total Chromium (III)	0	0		0	571.118	1,807	323,647	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	2,918	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	17,012	
Total Copper	0	0		0	13.476	14.0	2,514	Chem Translator of 0.96 applied

Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	64.786	81.9	14,675	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	295	Chem Translator of 0.85 applied
Total Nickel	0	0		0	469.386	470	84,223	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	3.233	3.8	681	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	11,640	
Total Zinc	0	0		0	117.469	120	21,509	Chem Translator of 0.978 applied
Total Strontium	0	0		0	N/A	N/A	N/A	
Osmotic Pressure	0	0		0	50	50.0	8,954	

☑ ***CFC*** CCT (min): 720 PMF: 0.690 Analysis Hardness (mg/l): 100.04 Analysis pH: 8.10

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	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	271,642	
Total Arsenic	0	0		0	150	150	185,210	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	5,062,411	
Total Boron	0	0		0	1,600	1,600	1,975,575	
Total Cadmium	0	0		0	0.246	0.27	334	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.140	86.2	106,446	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	12,835	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	23,460	
Total Copper	0	0		0	8.959	9.33	11,523	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	2,684,920	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.518	3.18	3,931	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	1,119	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.025	52.2	64,430	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	6,160	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	16,052	
Total Zinc	0	0		0	118.181	120	147,994	Chem Translator of 0.986 applied
Total Strontium	0	0		0	N/A	N/A	N/A	
Osmotic Pressure	0	0		0	N/A	N/A	N/A	

☑ ***THH*** CCT (min): 720 THH PMF: 0.690 Analysis Hardness (mg/l): N/A Analysis pH: N/A PWS PMF: 1

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	#########	WQC applied at RMI 0 with a design stream flow of 136 cfs
Chloride (PWS)	0	0		0	250,000	250,000	#########	WQC applied at RMI 0 with a design stream flow of 136 cfs
Sulfate (PWS)	0	0		0	250,000	250,000	#########	WQC applied at RMI 0 with a design stream flow of 136 cfs
Fluoride (PWS)	0	0		0	2,000	2,000	14,654,015	WQC applied at RMI 0 with a design stream flow of 136 cfs
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	6,915	
Total Arsenic	0	0		0	10	10.0	12,347	
Total Barium	0	0		0	2,400	2,400	2,963,362	
Total Boron	0	0		0	3,100	3,100	3,827,677	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	300	300	370,420	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	1,234,734	
Total Mercury	0	0		0	0.050	0.05	61.7	
Total Nickel	0	0		0	610	610	753,188	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	36,635	WQC applied at RMI 0 with a design stream flow of 136 cfs
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	296	
Total Zinc	0	0		0	N/A	N/A	N/A	
Total Strontium	0	0		0	4,000	4,000	4,938,937	
Osmotic Pressure	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** 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	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	

Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Total Strontium	0	0		0	N/A	N/A	N/A	
Osmotic Pressure	0	0		0	N/A	N/A	N/A	

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

No. Samples/Month: 4

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

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

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	3,663,504	mg/L	Discharge Conc ≤ 10% WQBEL
Chloride (PWS)	1,831,752	mg/L	Discharge Conc ≤ 10% WQBEL
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	1,831,752	mg/L	Discharge Conc ≤ 10% WQBEL
Fluoride (PWS)	14,654	mg/L	Discharge Conc ≤ 10% WQBEL
Total Aluminum	86,085	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	12,347	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	2,410,366	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	929,713	µg/L	Discharge Conc ≤ 10% WQBEL

Total Cadmium	246	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	106,446	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	1,870	µg/L	Discharge Conc < TQL
Total Cobalt	10,904	µg/L	Discharge Conc < TQL
Total Copper	1,611	µg/L	Discharge Conc < TQL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	370,420	µg/L	Discharge Conc < TQL
Total Iron	2,684,920	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	3,931	µg/L	Discharge Conc < TQL
Total Manganese	1,234,734	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	61.7	µg/L	Discharge Conc < TQL
Total Nickel	53,984	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)	36,635	µg/L	Discharge Conc < TQL
Total Selenium	6,160	µg/L	Discharge Conc ≤ 10% WQBEL
Total Silver	437	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	296	µg/L	Discharge Conc ≤ 10% WQBEL
Total Zinc	13,786	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Gross Alpha	N/A	N/A	No WQS
Total Beta	N/A	N/A	No WQS
Radium 226/228	N/A	N/A	No WQS
Total Strontium	4,938,937	µg/L	Discharge Conc ≤ 10% WQBEL
Total Uranium	N/A	N/A	No WQS
Osmotic Pressure	5,739	mOs/kg	Discharge Conc ≤ 10% WQBEL