Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0218049**
Facility Type	**Municipal**	APS ID	**1106764**
Major / Minor	**Minor**	Authorization ID	**1471857**

Applicant and Facility Information

Applicant Name	**Midway Sewerage Authority**	Facility Name	**Midway Sewerage Authority WWTP**
Applicant Address	PO Box 600 99 Saint John Street Upper Level Suite 2	Facility Address	8211 Noblestown Road
	Midway, PA 15060-0600		McDonald, PA 15057
Applicant Contact	David Koch	Facility Contact	
Applicant Phone	(724) 926-8050	Facility Phone	
Client ID	245356	Site ID	496410
Ch 94 Load Status		Municipality	Robinson Township
Connection Status		County	Washington
Date Application Received	February 1, 2024	EPA Waived?	Yes
Date Application Accepted	February 6, 2024	If No, Reason	

Purpose of Application: Renewal application to discharge treated sewage

Summary of Review

This review is in response to a renewal application received on Feb 1, 2024. Midway Sewerage Authority (Authority) owns and operates a sewage plant in Robinson Township, Washington County. Sewage from Midway Borough, Robinson Township, Cecil Township, Smith Township, and Mount Pleasant Township is treated with screening, grit removal, SBR's, and UV disinfection before discharging to Robinson Run.

Sludge is aerobically digested and dewatered with a belt filter press. Solids are ultimately landfilled at Allied Waste Imperial Landfill.

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		James Vanek James Vanek, P.E. / Environmental Engineer	December 19, 2024
X		Mahbuba Iasmin Mahbuba Iasmin, Ph.D. / Environmental Engineering Manager	December 23, 2024

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.5
Latitude	40Âº 21' 47.61"	Longitude	-80Âº 14' 53.39"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Robinson Run (WWF)	Stream Code	36794
NHD Com ID	99690010	RMI	11.6
Drainage Area	7.84	Yield (cfs/mi^2)	0.022
Q_{7-10} Flow (cfs)	0.17	Q_{7-10} Basis	USGS Stream Stats
Elevation (ft)	1160	Slope (ft/ft)	0.004
Watershed No.	20-F	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use	none	Exceptions to Criteria	none
Assessment Status	Impaired		
Cause(s) of Impairment	METALS, NUTRIENTS, SILTATION		
Source(s) of Impairment	ACID MINE DRAINAGE, NATURAL SOURCES, ON-SITE TREATMENT SYSTEMS (SEPTIC SYSTEMS AND SIMILAR DECENTRALIZED SYSTEMS)		
TMDL Status	Final, Final	Name	Chartiers Creek Watershed

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake	West View Municipal Authority		
PWS Waters	Ohio Rver	Flow at Intake (cfs)	4800
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: none

Treatment Facility Summary				
Treatment Facility Name: Midway Sewer Authority WWTP				
WQM Permit No.	**Issuance Date**			
6300404				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	SBR	UV	0.238
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.5	1100	Not overloaded	Aerobic digestion and belt filter press	Landfill

Changes Since Last Permit Issuance: none

Other Comments:

Compliance History

Effluent Violations for Outfall 001, from: December 1, 2023 To: October 31, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	05/31/24	IMAX	3066	No./100 ml	1000	No./100 ml

Summary of Inspections:

Other Comments:

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .5
Latitude 40º 21' 48.00" **Longitude** -80º 14' 54.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
Total Suspended Solids	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments:

Water Quality-Based Limitations

Water quality analysis was not performed. Robinson Run is the receiving stream for the Midway plant. It is acid mine drainage affected. 25 PA Code §95.5(a)(1) states that secondary limits apply for sewage discharges to acid mine drainage affected streams.

Best Professional Judgment (BPJ) Limitations

Dissolved oxygen will be limited at 4.0 mg/l instantaneous minimum limit.

Anti-Backsliding

No relaxation on permit limits or conditions was imposed in this renewed permit.

Mass Loadings

Per Department SOP "Establishing Effluent Limitations for Individual Sewage Permits" (BCW-PMT-033), mass loading limits will be established for POTWs for $CBOD_5$, TSS, ammonia nitrogen. Average monthly mass loading limits will be established for $CBOD_5$, TSS, and ammonia nitrogen. Average weekly mass loading limits will be established for $CBOD_5$ and TSS. Mass loading limits will be calculated according to the formula below:

$$average\ annual\ design\ flow\ (MGD) \times concentration\ limit\ \left(\frac{mg}{L}\right) \times 8.34\ (converstion\ factor)$$
$$= mass\ loading\ limit\ (\frac{lbs}{day})$$

The following mass loading limitations were calculated:

Parameter	Average Monthly (lbs/day)	Average Weekly (lbs/day)
$CBOD_5$	**104**	**156**
TSS	**125**	**188**

TMDL Chartiers Watershed

There is a TMDL for metals in the Chartiers Creek watershed. The contribution for metals from a sewage plant is expected to be less than water quality criteria and therefore not contributing to stream impairment. Annual monitoring is imposed greater than 2000 gpd. Monitoring for aluminum, iron and manganese is required to ensure there are no impacts on the quality of the receiving stream.

TN and TP Montoring

Nutrient monitoring is required to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). Sewage discharges with design flows > 2,000 gpd require monitoring, at a minimum, for Total Nitrogen and Total Phosphorus in new and reissued permits. Annual monitoring has been imposed.

Monitoring Frequency Considerations

For pH, Dissolved Oxygen (DO) and UV dosage, a monitoring frequency of 1/day has been imposed. The daily monitoring frequencies are consistent with current policy and Table 6-3 of DEP's Technical Guidance for the Development and Specification of Effluent Limitations.

Influent Monitoring

For POTWs with design flows greater than 2,000 GPD influent BOD_5 and TSS monitoring must be established in the permit, and the monitoring should be consistent with the same frequency and sample type as is used for other effluent parameters.

Sample Types

For new or expanding facilities with design flows ≥ 0.1 MGD and < 1.0 MGD, 8-hour composite sampling will be used for conventional and toxic pollutants except where grab sampling is appropriate (e.g., TRC, Fecal Coliform, pH, DO, etc.) and unless site-specific justification is provided in the fact sheet for a deviation.

Industrial Customers

The renewal application identifies several commercial businesses that contribute sewage. The application does not list any actual industrial contributors to the sewer system.

Disinfection

Where ultraviolet (UV) disinfection is used, TRC limits are not applicable, but the limits table in Part A will generally contain, at a minimum, routine monitoring of UV transmittance (%), UV dosage (µWs/cm^2 or mWs/cm^2 or mjoules/cm^2) or UV intensity (µW/cm^2 or mW/cm^2) at the same monitoring frequency that would be used for TRC.

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	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0	XXX	XXX	XXX	1/day	Grab
CBOD5	104	158	XXX	25.0	38.0	50	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS	125.0	188.0	XXX	30.0	45.0	60	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/month	Recorded
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
Total Nitrogen	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab

Outfall 001 , Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia	Report	XXX	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Total Aluminum	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Total Iron	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Total Manganese	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab

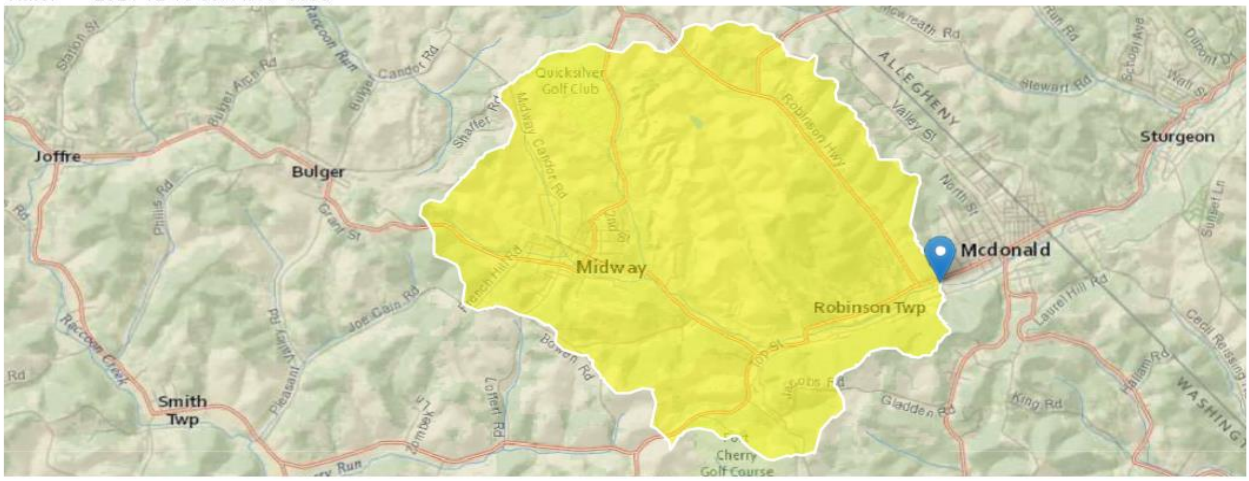
Compliance Sampling Location: outfall 001

Other Comments:

References

StreamStats Report

Region ID: PA
Workspace ID: PA20241218134424180000
Clicked Point (Latitude, Longitude): 40.36518, -80.24363
Time: 2024-12-18 08:44:45 -0500



Midway Sewerage Authority STP

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLPDRPA20	Unadjusted basin slope, in degrees, from PA v1	7.9604	degrees
CARBON	Percentage of area of carbonate rock	0	percent
DRNAREA	Area that drains to a point on a stream	7.84	square miles
ELEV	Mean Basin Elevation	1161	feet
FOREST	Percentage of area covered by forest	42.2828	percent
PRECIP	Mean Annual Precipitation	38	inches
URBAN	Percentage of basin with urban development	14.5375	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	7.84	square miles	2.26	1400
ELEV	Mean Basin Elevation	1161	feet	1050	2580

Low-Flow Statistics Flow Report [Low Flow Region 4]

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	0.285	ft^3/s	43	43
30 Day 2 Year Low Flow	0.499	ft^3/s	38	38
7 Day 10 Year Low Flow	0.102	ft^3/s	66	66
30 Day 10 Year Low Flow	0.187	ft^3/s	54	54
90 Day 10 Year Low Flow	0.343	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/)

Base Flow Statistics

Base Flow Statistics Parameters [Statewide Mean and Base Flow]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CARBON	Percent Carbonate	0	percent	0	99
DRNAREA	Drainage Area	7.84	square miles	2.26	1720
FOREST	Percent Forest	42.2828	percent	5.1	100
PRECIP	Mean Annual Precipitation	38	inches	33.1	50.4
URBAN	Percent Urban	14.5375	percent	0	89

Base Flow Statistics Flow Report [Statewide Mean and Base Flow]

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
Base Flow 10 Year Recurrence Interval	2.9	ft^3/s	21	21
Base Flow 25 Year Recurrence Interval	2.52	ft^3/s	21	21
Base Flow 50 Year Recurrence Interval	2.31	ft^3/s	23	23

Base 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/)

§ 95.5. Treatment requirements for discharges to waters affected byabandoned mine drainage.

(a) For wastes discharged to waters polluted by abandoned coal mine drainage, so that the applicable water quality criteria are not being met and designated water uses are not being achieved to the extent that aquatic communities are essentially excluded, and where the pollution cannot be remedied by controlling known, active discharges, the following degrees of treatment shall be provided:

(1) Sewage, as defined in The Clean Streams Law (35 P. S. § § 691.1—691.1001), shall receive secondary treatment, as defined by this chapter.

(2) Industrial waste as defined in The Clean Streams Law (35 P. S. § § 691.1—691.1001), shall achieve one of the following degrees of treatment, as appropriate, which are defined under 33 U.S.C.A. § § 1314(b) and 1316(b):

(i) Best Conventional Pollutant Control Technology (BCT).

(ii) Best Available Technology Economically Achievable (BAT).

(iii) Standards of performance for new sources.

(b) A greater degree of treatment will be required to the waters where one of the following exists:

(1) The water quality of the receiving water has or is expected to improve significantly.

(2) The minimum degree of treatment required would cause pollution in downstream waters, so that designated stream uses in these downstream waters would not be achievable.

Source

The provisions of this § 95.5 amended February 15, 1985, effective February 16, 1985, 15 Pa.B. 544. Immediately preceding text appears at serial pages (44654) and (44655).
