pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NORTHEAST REGIONAL OFFICE
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET ADDENDUM

Application Type	**Renewal**	Application No.	**PA0061034**
Facility Type	**Sewage**	APS ID	**508381**
Major / Minor	**Minor**	Authorization ID	**1108116**

Applicant and Facility Information

Applicant Name	**Waverly Township**	Facility Name	**Waverly Township**
Applicant Address	Lake Henry Drive, PO Box 8	Facility Address	Lake Henry Drive
	Waverly, PA 18471-0008		Waverly, PA 18471
Applicant Contact	Christine Capozzi	Facility Contact	Tom James
Applicant Phone	(570) 586-0111	Facility Phone	(570) 881-0009
Client ID	87532	Site ID	250886
SIC Code	4952	Municipality	Waverly Township
SIC Description	Trans. & Utilities - Sewerage Systems	County	Lackawanna
Date Published in PA Bulletin	January 5, 2019	EPA Waived?	No
Comment Period End Date	February 4, 2019	If No, Reason	Significant CB Discharge
Purpose of Application	Renewal of NPDES permit.		

Internal Review and Recommendations

Public notice of original draft permit issuance was published in the PA Bulletin on January 5, 2019. Issuance of the final permit had been on hold for various discussions between the Department and Waverly Township. A comment letter from the applicant's consultant, Milnes Engineering, Inc., was received by the Department in an email dated February 14, 2019. The comment letter is attached and responses to the two main concerns of the comment letter are below. A letter from Waverly Township's solicitor regarding the issuance of this draft permit was received in an email dated October 12, 2022. The letter (attached) discusses past and future projects to improve the WWTP / collection system, expresses concerns about the revised Ammonia-N limitations, and indicates Waverly Township does not wish to enter a Consent Order & Agreement with the Department. A second draft permit is being issued due to changes made to the permit and the time elapsed since original draft permit issuance.

Ammonia-N Limitations:

The draft permit contained more stringent Ammonia-N limitations that were set to come into effect 4 years after the permit effective date. The summertime monthly average limitation was reduced from 4 mg/L to 1.5 mg/L and the wintertime monthly average limitation was reduced from 12.0 mg/L to 4.5 mg/L. The revised limitations were developed using DEP's latest version of WQM 7.0. The fact sheet for the previously issued permit (2011) indicates the water quality-based limitations were based on modeling performed in 1999. Current DEP guidance requires the discharge to be remodeled during every 5-year permit renewal period due to potential changes in the Chapter 93 water quality standards.

For modeling inputs, RMI values were obtained using the "PA Historic Streams" feature of eMapPA as well as the "measure" tool. Drainage areas were delineated using USGS's StreamStats Interactive Map and elevations were obtained using the elevation profile feature of StreamStats. The low flow yield used for modeling was increased from 0.041 cfs/mi^2 to the default low flow yield of 0.1 cfs/mi^2 when compared to the previously issued permit since it was determined the data from stream gage 01534000 (Tunkhannock Creek at Tunkhannock, PA) was not representative of the conditions on Tributary 28835 to Ackerly Creek (see original draft permit fact sheet, dated 12/14/2018). Through discussions between the

Approve	Return	Deny	Signatures	Date
X			Brian Burden Brian Burden, E.I.T. / Project Manager	December 15, 2022
X			Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	12-16-22

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Department and the applicant since original draft permit issuance, it was decided the township would not be providing site-specific data for modeling inputs at this time and would accept the values utilized in the latest WQM 7.0 model run.

The attached comment letter indicates Waverly Township would not be able to meet the revised Ammonia-N limitations with the treatment system utilized at the WWTP. DEP staff from its wastewater technical assistance program (WWTAP), a federally funded instructional and process optimization program in its Bureau of Clean Water, arrived at the WWTP in late-January 2021, to deploy monitoring equipment and conduct limited-scope process monitoring tests. An April 2021 study of the WWTP prepared by Marc Neville from DEP's Bureau of Clean Water in Harrisburg (attached) indicates the Amphidrome can treat to the new Ammonia-N requirements, provided that certain treatment issues are addressed by the facility owner, including: a.) high inflow and infiltration in the collection system, and b.) insufficient alkalinity during periods of high flows. Among other things, the study also recommended the permittee evaluate methods to increase ammonia loading to the Amphidrome and to evaluate performance of the lagoons and consider removal of some of the sediments/sludges more frequently. It's not recommended to change or upgrade the treatment process at the WWTP.

After considering the study results, the Department's obligation to apply Chapter 93 water quality standards in all new and renewed NPDES permits, and the impairment status of the receiving stream, the revised and more stringent Ammonia-N limitations remain in this draft permit and will come into effect 4 years from the permit effective date. The permittee may conduct site-specific studies to change the model inputs and update the Ammonia-N limitations as described in Part C.VI of the permit.

In accordance with 40 CFR 122.47 (Schedules of compliance), a compliance schedule is included in Part C of the 2nd draft permit for the new Ammonia-N limitations with yearly milestones. The previous draft permit didn't include yearly milestones for compliance with the revised water quality-based Ammonia-N limitations.

The comment letter requests to model the discharge at the old permitted rate of 0.36 MGD, however, the request cannot be granted. Both WQM permit 3513401 and previously issued PA0061034 identify a design flow rate of 0.5 MGD. eDMR data over the previous 2 years shows average monthly flow rates over 0.36 MGD for 5 months (~20% of the time).

$CBOD_5$ and TSS Limitations:

The draft permit included revised and more stringent limitations for $CBOD_5$ and TSS based on standards in the Department's *Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers* (doc. no. 391-2000-014). $CBOD_5$ and TSS monthly average limitations were reduced to 10 mg/L for both parameters. After further review, DEP agrees with Milnes Engineering that the revised limitations in the guidance document should only be applied to new or expanding facilities. Therefore, the $CBOD_5$ and TSS limitations from the previously issued permit are included in this 2nd draft permit.

Additional Considerations:

The conclusions of the DEP study of the WWTP indicate 24-hour composite sampling would be more appropriate than 8-hour composite sampling and would help the permittee gain a better understanding of pollutant levels in the treatment process. All composite sampling requirements are updated to 24-hour composite samples in this 2nd draft permit.

In accordance with 40 CFR 122.47 (Schedules of compliance), a compliance schedule is included in Part C of the 2nd draft permit for the new TRC limitations with yearly milestones. The previous draft permit didn't include yearly milestones for compliance with the water quality-based TRC limitations.

Quarterly monitoring/reporting for E. Coli is added to the permit as per DEP current guidance.

Note: A cause/effect stream survey (attached) was conducted on February 22, 2022 on Tributary 28835 to Ackerly Creek in Waverly Township and Dalton Borough in Lackawanna County. The purpose of this survey was to evaluate the current biological health of this receiving stream downstream of the Waverly Township WWTP for permit renewal. This tributary is also on the 303 (d) List of Impaired Waters and is listed as impaired for aquatic life from: Source: Municipal Point Source, Cause: Organic Enrichment, Total Suspended Solids, and Source: Urban Runoff/Storm Sewers, Cause: Metals.

The conclusions of the survey are as follows: *"The unnamed tributary to Ackerly Creek in Waverly Township continues to show biological impairment with an overall lack of sensitive taxa and dominance by pollution tolerant taxa and individuals,*

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especially Chironomidae (midges). The lowest IBI score found was immediately downstream of the Waverly Township WWTP discharge. Although the upstream reference also scored low, the lack of stable substrate and influence of wetlands was apparent. The biology was further degraded downstream of the discharge, though the stream increased in gradient and size and the habitat improved with the increase in rocky substrate. Conditions improved near the mouth in Dalton Borough where the IBI score was just above the impairment threshold, but a lack of stonefly individuals prevents full attainment. Aluminum results did not exceed the water quality criterion at any station.

Although water chemistry results from the day of sampling do not show a clear cause for the impacts, the fact that the lowest score was found downstream of the discharge, with improvement at the mouth, indicates that the primary source of impairment emanates from the discharge, whether the cause is episodic toxicity or effluent dominance during critical low streamflow periods."

A stream study of tributary 28835 to Ackerly Creek was conducted in September 2021 by J. Hockenberry Environmental Services. The study was in response to the Department's proposed Ammonia-N limits at the Waverly Township WWTP and to determine if the facility was impacting the receiving stream. The DEP survey conducted in February 2022 was an effort to verify the consultant's survey. DEP's review of the J. Hockenberry Environmental Services cause/effect stream study is also attached below.


2019 Waverly Comment Letter.pdf


2021 Waverly Amphidrome Study.


2022 Waverly WWTP Stream Surve


2022 Solicitor Letter.pdf


Waverly Consultant Data Review.pdf