



VIA ELECTRONIC MAIL

October 19, 2023

Paul Mantello, Town Administrator
Town of Middletown
31 West Main Street
Middletown, MD 21769

Re: Facility Planning Limitations for the Upgrade and Expansion of the Middletown East Wastewater Treatment Plant (WWTP), Discharge Permit Number: 13-DP-3182, NPDES No. MD0067628

Dear Mr. Mantello,

This letter is in response to an electronic request regarding the future compliance status and permit renewal eligibility of the Middletown West (MTW) WWTP, with respect to the upcoming upgrade and expansion of the Middletown East (MTE) WWTP. We have the following suggestions for your consideration:

- As we discussed in our meeting on October 12, 2023, the plant performance data indicates that the existing facility may not be able to meet the newly adopted ammonia criteria (see table below for comparison). Therefore, a treatment process upgrade will be necessary to stay in compliance with the ammonia effluent requirements in the future permit.

Effluent Characteristics	Current Ammonia Limits	Effluent Limits for Ammonia, based on Newly Adopted Criteria	Current Performance
Facility Design Capacity	0.250 mgd	0.250 mgd	0.250 mgd
Total Ammonia Nitrogen as N (5/1 to 10/31)	3.8 mg/L max monthly ave. 11.5 mg/L daily max.	1.5 mg/L max monthly ave. 4.3 mg/L daily max.	3.2 mg/L max monthly ave. 3.1 mg/L daily max.
(11/1 to 4/30)	N/A	7.6 mg/L max monthly ave.	11.8 mg/L max monthly ave.

- Furthermore, the lagoons situated at the MTW WWTP are positioned within a 100-year floodplain, heightening the risk of contaminating the nearby receiving stream in the event of

Mr. Mantello

an overflow during severe weather conditions. To mitigate this concern, the forthcoming discharge permit will incorporate a Climate Change Resiliency requirement, outlined below, obligating the facility to proactively address and minimize potential disruptions to its operations and compliance stemming from this factor. As a result, we recommend that the facility begin preparation to address this upcoming requirement.

Climate Change Resiliency Requirements

The effects of climate change are projected to be more pronounced in the coming decades. As a result, the intensity and frequency of extreme weather events may quickly overload the wastewater facility hydraulically, disrupt the operation in the treatment works, and cause the potential endangerment of aquatic life and public health. The permittee shall enhance the climate change resiliency of the facility through the following measures:

- 1. The permittee shall conduct annual assessment and maintenance, as needed, of the facilities at the treatment works to confirm they are adequate to address the potential inflow surges during the extreme weather events. The assessment shall be based on the history of storms and their corresponding peak flows and waste loads recorded at the facility. The records of evaluations and maintenance shall be documented and made available to the Department upon request. See Special Condition II.C “Wastewater Capacity Management” of the discharge permit for details.*
- 2. The permittee shall plan for impacts to power supplies during extreme weather events based on the history of storms and the demand from critical operations at the facility. Please refer to General Conditions III.B.4 “Adverse Impact” and III.B.8 “Power Failure” of the discharge permit for further details.*

No later than six months from the effective date of this permit, the permittee shall develop and submit a report to the Department that explains the permittee’s plan for addressing potential impacts on power supplies during extreme weather events.

Should you have any questions in this matter, please feel free to contact me at (410) 537-3363 or Colleen O’Donnell at (410) 537-3698.

Sincerely,



Yen-Der Cheng, Chief
Municipal Surface Discharge Permits Division

cc: Robin Pellicano, Chief, Water Resources Planning Division (MDE)
Walid Saffouri, P.E., Director, Engineering & Capital Projects Program (MDE)
Kelly Duffy, P.E., Wastewater Treatment (RK&K)
Bob Andryszak, P.E., Wastewater Treatment (RK&K)
Kelly Ferguson, P.E., Project Engineer (RK&K)
Bruce Carbaugh, Director of Public Works, Town of Middletown, MD