Final Fact Sheet

3782 19 Days Cove FS.docx
Last Printed/Revised/Created on ***April 13, 2026***

MARYLAND DEPARTMENT OF THE ENVIRONMENT
WATER AND SCIENCE ADMINISTRATION
INDUSTRIAL STORMWATER PERMITS DIVISION

SUMMARY REPORT AND FACT SHEET

The Region III EPA Permit Checklist has been used as a guide to the permit review process. The results of the review and supporting rationale for the draft permit are summarized below. Supporting documents are attached including the application status memo, draft permit, application, and copies of the previous fact sheet and previous permit's cover page and special conditions.

Permit Type:	WMA1 (minor)	**Project Type:**	Industrial/Surface/Renewal
State Application No.:	19-DP-3782	**EPA No.:**	MD0071587
Application Received:	7/20/2018	**Permit Expiration:**	12/16/2018
Basin Code:	02.13.08.03	**Basin Name:**	Bird River
Legal Name of Applicant:	Days Cove Reclamation Company		
Mailing Address:	6425 Days Cove Road White Marsh, Maryland 21162		
Facility Name:	Days Cove Rubble Landfill		
Location:	6425 Days Cove Road White Marsh, Maryland 21162		
County:	Baltimore		
Contact (Name, Title):	Darren Hunt, Vice President of Operations		
Contact Address:	Days Cove Reclamation Company 6425 Days Cove Road White Marsh, MD 21162		
Contact Phone:	410-335-3778	**FAX:**	N/A
Contact Email:	dhunt@dayscove.com		
SIC Code(s):	4953 (Refuse Systems)		
Applicant discharges from:	A rubble landfill		
Via Outfall(s):	002		

RECEIVING WATER INFORMATION

Name of Receiving Water Body (& any Comments):	**Designated USE Class**	**Salinity**	**Tidal**	**Discharge to Tier II Waters**
Gunpowder Falls/Days Cove	II	Fresh	Yes	No
MD Coordinates of Facility (in 1,000 ft.):	**East:**	1488.1	**North:**	629.8

Project Mgr.:	Joey Dickson	**Subject to EPA Review:**	Yes
Phone:	410-537-4414	**Assigned:**	To Joey 3/15/25
Site Visit(s) Dates:	12/15/2020 & 4/8/2025	**EJ Score (percentile):**	66th

Date Completed:	5/13/2025	**Revision Dates:**	4/13/26		
Reviewed by:	Casey Leach	CL	**Date: 5/14/25**		
Accepted by:	Paul Hlavinka	PSH	**Date: 5/14/25**		

I. Summary of Changes from the Previous Permit

#	Type of Change (New, Update, etc.)	Type of Change (Limitation, Monitoring, Special Condition)	Brief Description of the Change	Section of the Permit	Section of the Fact Sheet
1	New	Special Condition	This PFAs monitoring special condition was added. Maryland is requiring testing by POTWs and industrial facilities in order to identify sources of PFAS in the state.	Section I Special Condition R	Section XVI Special Condition R
2	Update	Special Condition	The language for Special Condition O "Additional Nitrogen Restrictions" in the renewal permit was clarified to address the difference between nutrients discharged and nutrients in water hauled away for treatment elsewhere.	Section I Special Condition O	Section XVI Special Condition O
3	Update	Special Condition	The language in the renewal permit Special Condition P "Use of Treated Wastewater for Alternate Purposes" was updated to include a requirement for a log to be kept by the permittee.	Section I Special Condition P	Section XVI Special Condition P
4	New	Special Condition	Special Condition S "Evaluation of BOD Impacts" was added to address any potential downstream impacts of BOD discharges from the facility.	Section I Special Condition S	Section XVI Special Condition S
5	Update	Special Condition	The Special Condition K (Biomonitoring) was marked reserved based on the biomonitoring results and thus not required under the renewal permit.	Section I Special Condition K	Section XVI Special Condition K
6	Update	Special Condition	Ammonia criteria updated to reflect changes in COMAR.	Section I Special Condition A.1	Section VII

II. Description of Facility and Activities Generating Discharge

Days Cove Rubble Landfill, in White Marsh, Maryland, is on a peninsula formed by the Bird River and Days Cove and the Gunpowder River. The site is within the Gunpowder Falls State Park on land leased from the Maryland Department of Natural Resources. The landfill occupies 82.54 acres of the overall 113.8 acre site. The Eastern Sanitary Landfill is immediately to the west of the site and wooded areas are to the north, south, and east.

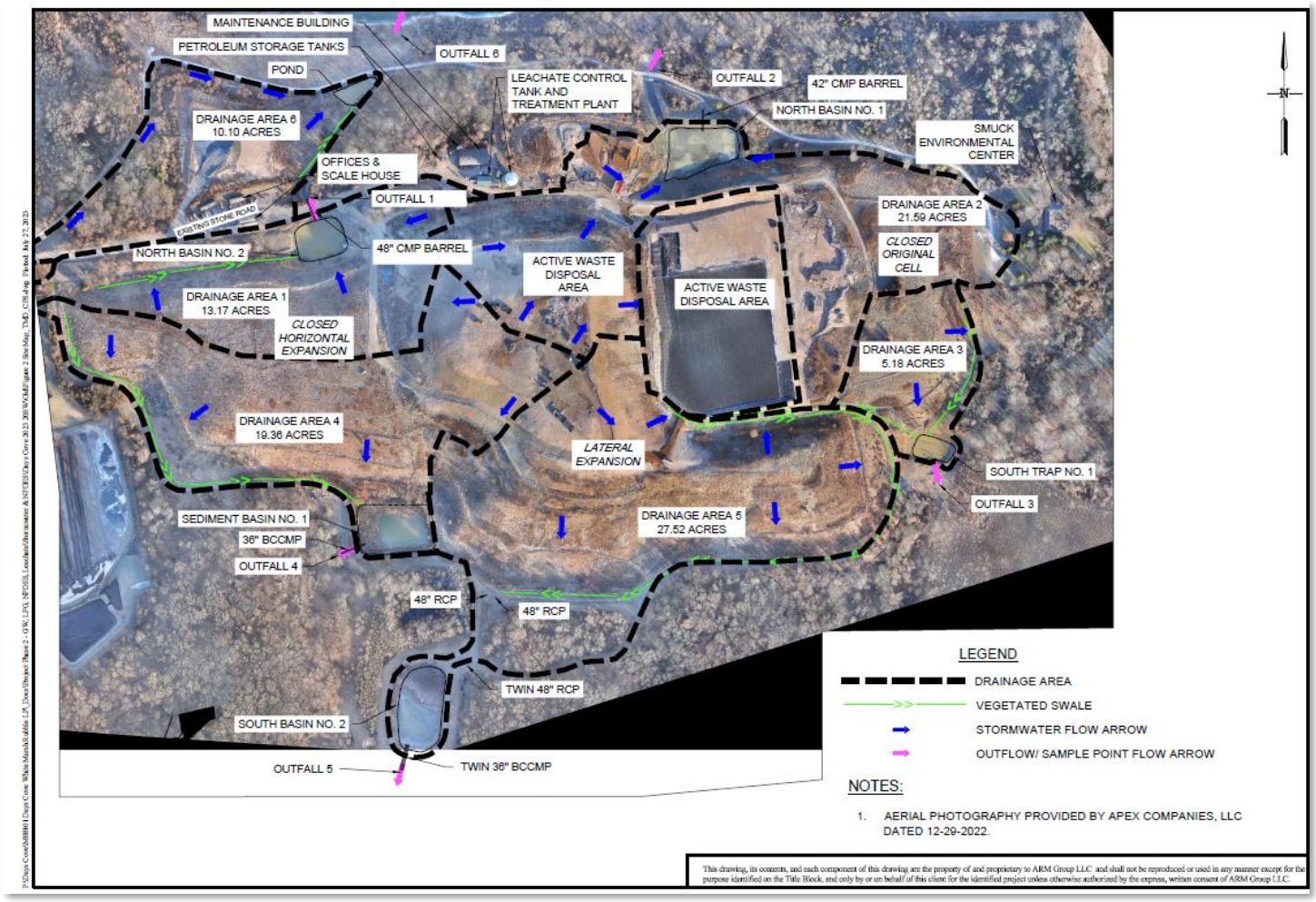
The facility accepts various construction materials: brick, concrete and other masonry materials, glass, drywall, roofing materials, plumbing fixtures, electrical wiring, carpeting, asphalt, insulation, wood (building material), building components (doors and windows), and trees, soil and rock from clearing.

The landfill currently consists of four major cells: two existing, closed landfill cells (Original Cell and Horizontal Expansion Cell), one active cell (Lateral Expansion Cell), and one recently permitted/partially active cell (Vertical Expansion Cell), arranged on an east/west axis. Note the Vertical Expansion (VE) is situated directly atop portions of the

Original, Horizontal Expansion, and Lateral Expansion Cells. The Landfill's Original Cell, which has been closed, capped, and stabilized with vegetation since 2000, is situated at the eastern site limits. Furthest to the west is the Days Cove Rubble Landfill Horizontal Expansion (HE). Landfilling operations at this unit were completed in 2004, and the final cap and closure was completed in 2006.

Situated between, and immediately adjacent to both existing cells, is the active Lateral Expansion (LE). The LE comprises approximately 35 acres of landfill area between the two inactive units and along the south side of the Original Cell. The LE was broken down into sub-cells designated sequentially with letters 'A' through 'I'. All leachate generated within the LE limits is collected and treated at the plant.

The last remaining cell, the VE, is currently permitted and in the initial stages of site construction. The VE is approximately 58.2 acres in size located atop the existing disposal footprints of the DCRLF's Original Cell, Horizontal Expansion, and Lateral Expansion Cells. All leachate generated within the VE limits will be collected and treated at the plant. Presently, as of May 2025, the Original Cell Phase I portion of the Vertical Expansion was constructed and approved to accept waste.



Map 1 - Days Cove Rubble Landfill full site

Because the site is an un-reclaimed surface mine, stormwater was initially regulated by the general permit for mineral mines' NPDES permit. As the activity has changed to a landfill, the site is now registered under the Department's General Permit for Discharges from Stormwater Associated with Industrial Activities NPDES permit (currently State Permit No.

20SR3374 and NPDES Permit No. MDR003374).

The permittee had been hauling the wastewater for offsite disposal and first applied for a permit to discharge to surface waters in 2012. The existing permit, 12-DP-3782, was effective beginning December 17, 2013. However, the applicant initially continued hauling the wastewater offsite for disposal, so discharges did not commence until April 2023. The permittee still has the ability to haul wastewater to Back River WWTP when necessary.

When applying for the previous permit, the applicant proposed to treat the wastewater to drinking water standards. The proposed treatment system included biological treatment, dissolved air flotation (DAF), ultrafiltration, reverse osmosis (RO), and hydrogen peroxide disinfection. The RO brine would be sent to a wastewater treatment plant. With the current application, the permittee wants the option to discharge the wastewater without RO and possibly without ultrafiltration. Assuming that permit limits can still be met, the need to send the RO brine to a WWTP would be eliminated.

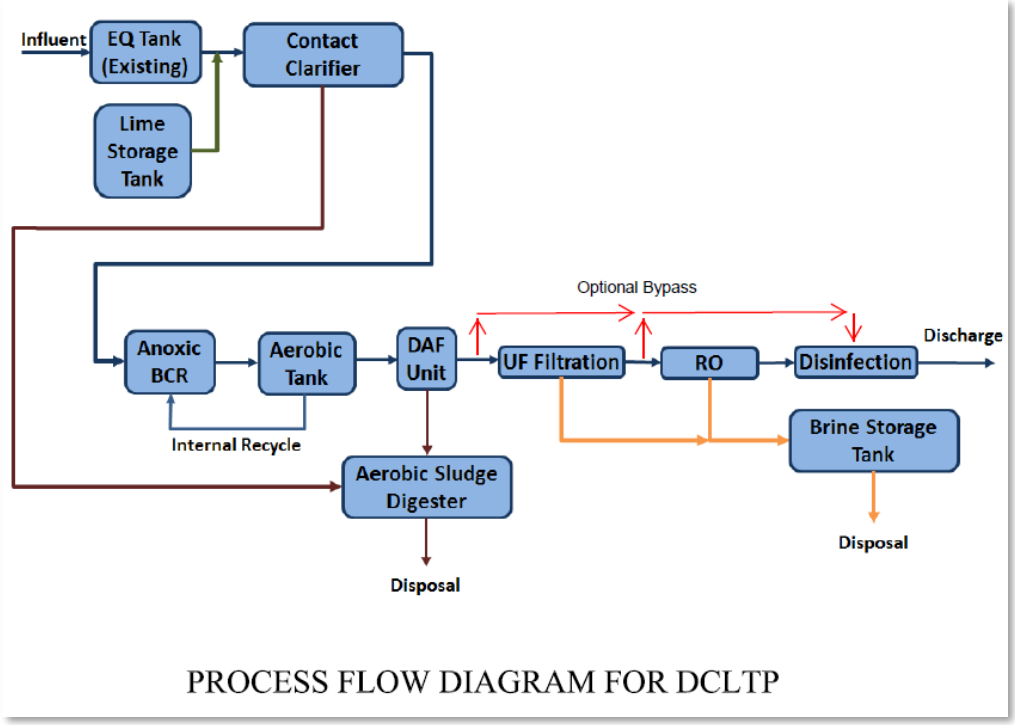


Diagram 1 - Days Cove Rubble leachate treatment plant process flow diagram

The previous permit authorized wastewater discharge from two outfalls – 002 and 003. Outfall 003 has since been eliminated with the expansion of a stormwater management pond draining to Outfall 002, which is now the sole outlet for wastewater. Outfalls 001,004, 005, and 006 are outlets of other onsite stormwater ponds which are permitted under the 20SW general permit (currently State Permit No. 20SR3374 and NPDES Permit No. MDR003374).

Map 2 - Outfall 002 Location related to Old Mining Pit

Treated effluent from the WWTP is stored in an effluent disposal tank and pumped to the stormwater pond through a magnetic flow meter. The discharge then makes its way along a drainage swale and overland through forested land to the old mining pit (which has been flooded). The outlet of the old mining pit empties into Days Cove (see Map 2).

The treated effluent is either stored in an effluent disposal tank, located adjacent to North Basin No. 1, or directly discharged into the North Basin No.1. From North Basin No. 1, discharge then exits through the North Basin No. 1 outfall structure, through a riprap lined channel, and into a plunge pool, where the discharge flows through forested land to the old mining pit. The outlet of the old mining pit discharges into Big Gunpowder Falls, which flows to Days Cove.

In the event that the treated effluent does not comply with the effluent limitations outlined in this permit the discharge is sent to an effluent storage tank for final disposal at a publicly owned treatment facility. The effluent that doesn't discharge and is hauled to the POTW does not count against the annual maximum nitrogen loading limit set forth in this permit.

III. Review of Stormwater Pollution Prevention Plan (SWPPP)

An updated SWPPP was submitted with the Notice of Intent to renewal coverage under the 20-SW general permit in July 2023. A cursory review of that SWPPP shows it was updated as of July 2023 and contained updated maps, and adequate best management practices (BMPs) for stormwater runoff.

IV. Results of File Review

The file review did not turn up any outstanding issues.

V. Results of Studies

Biomonitoring studies, required by Special Condition K of the previous permit, were conducted at the facility between June 2023 and March 2024. Samples collected in December 2023 resulted in a finding of toxicity, but a subsequent retest

in January of 2024 indicated no toxicity. The initial three samples collected in June 2023, September 2023, and March 2024 also showed no toxicity.

VI. Results of a Review of Compliance History -

The discharge monitoring reports (DMRs) for this facility are graphed below and were reviewed for the period when discharges occurred. From commencement of discharge in April 2023 through February 2025, the permittee has exceeded its permit limits a total of 20 times. However, it is notable that 14 of the 20 exceedances occurred in the first five months of discharge, indicating that there was a learning curve to optimize treatment following the startup of discharge. The Water and Science Administration Compliance Program took enforcement action for a total of 16 permit exceedances occurring throughout 2023 which resulted in a penalty of $15,000.

The figures below present DMR data that was collected and submitted to the department through the NetDMR program. The measured parameters were reported to the NetDMR program for Outfall 002. However, some of the parameters were not sampled at Outfall 002, per the discharge permit.

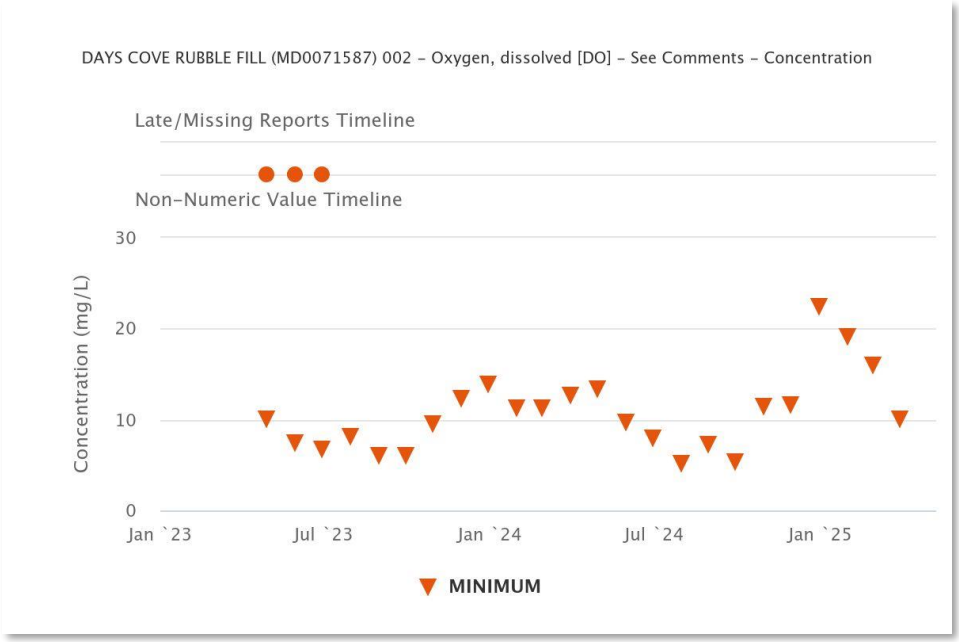


Figure 1- DO concentrations at old mining pit at edge of 20 foot mixing zone

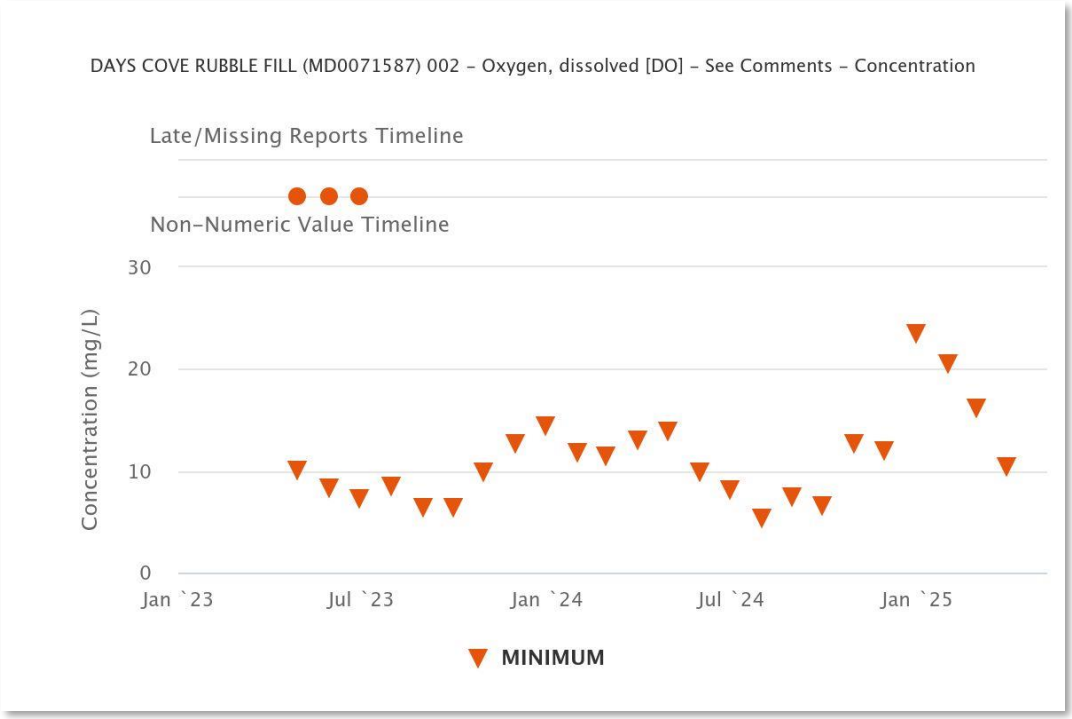


Figure 2 - DO concentrations at old mining pit background concentration

Since the DO concentrations have never been below 5 either for the background or edge of mixing zone, the DO difference was never required to be reported.

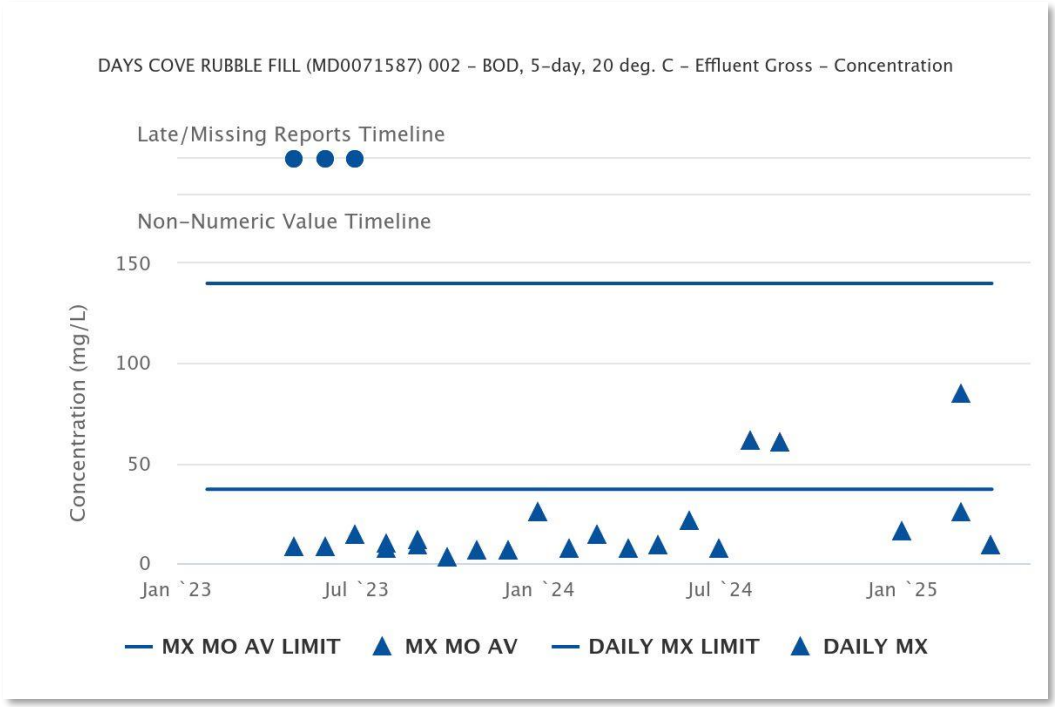


Figure 3 - BOD concentrations at Outfall 002

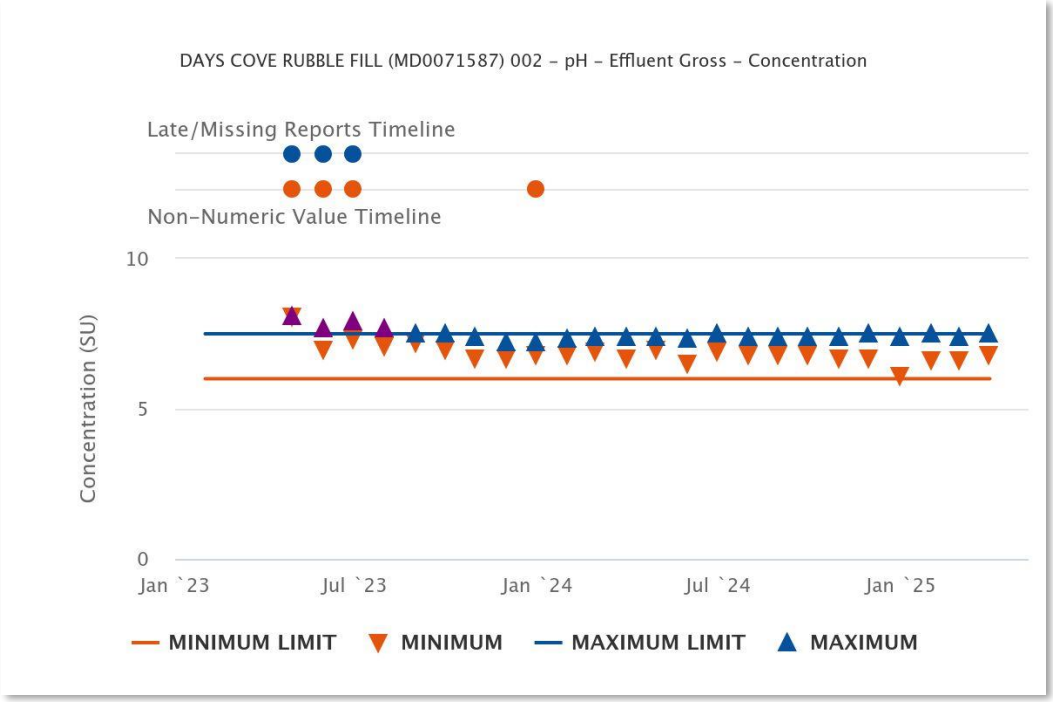


Figure 4 - pH at Outfall 002

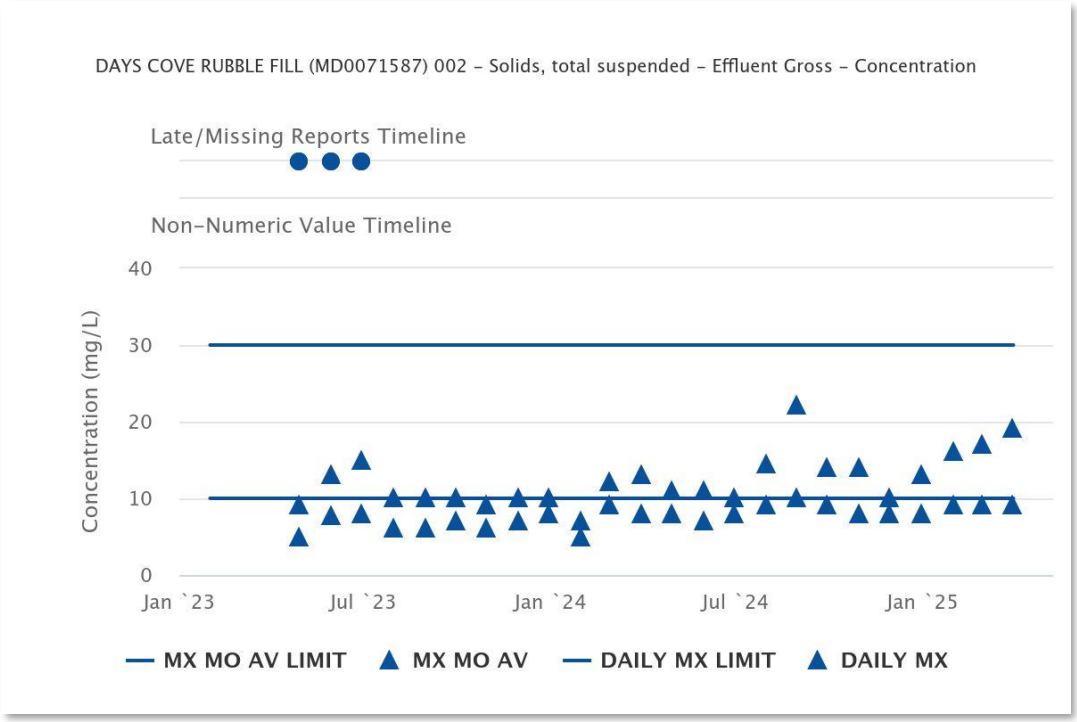


Figure 5- TSS concentrations at Outfall 002

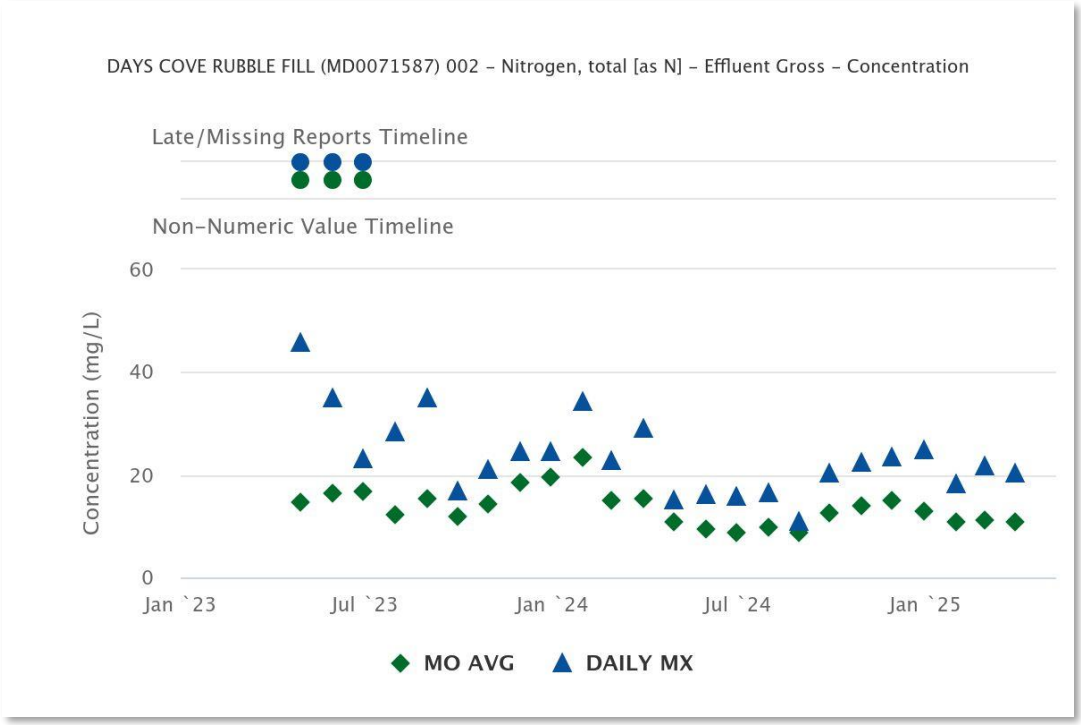


Figure 6 - Total Nitrogen concentrations at Outfall 002

Total nitrogen concentration is a report only item. It is noteworthy that the reported concentrations are above the permittee's treatment plant specifications, which projected the total nitrogen to be below 10 mg/L.

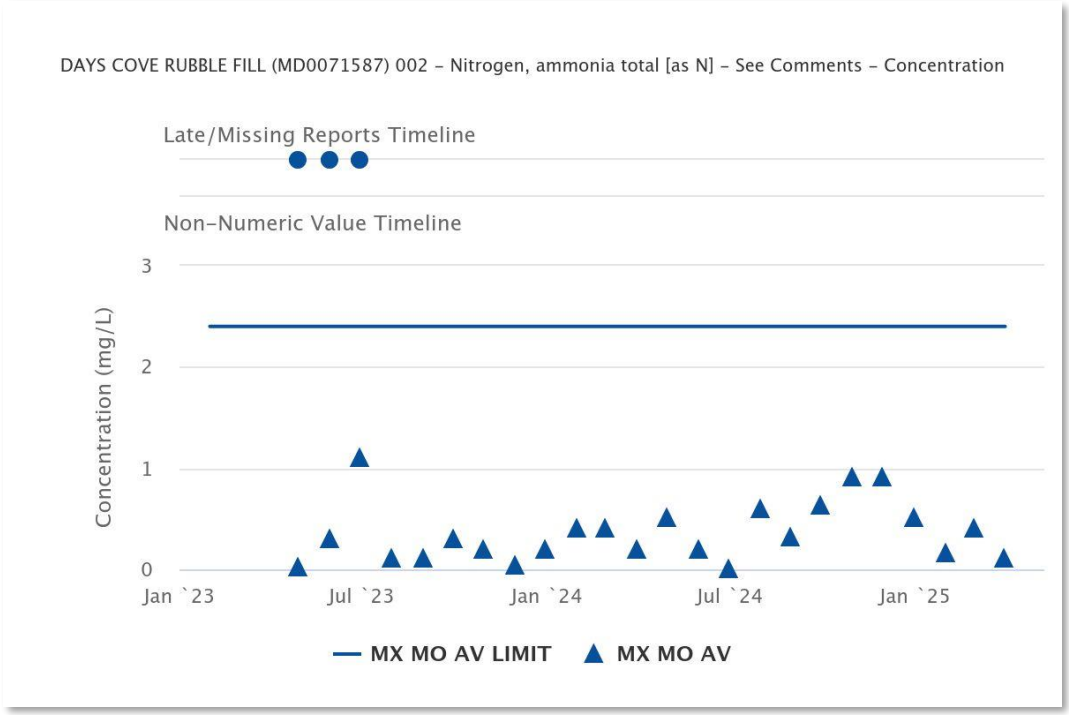


Figure 7 – Ammonia concentrations (immediately before wastewater enters receiving pond)

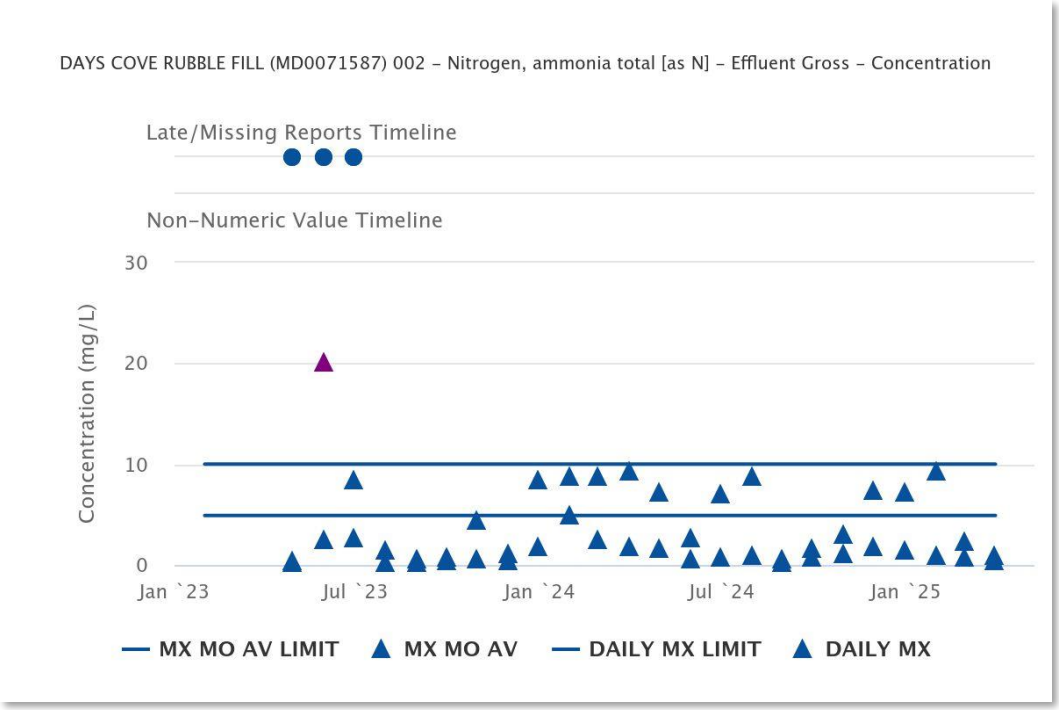


Figure 8 - Ammonia concentrations at WWTP

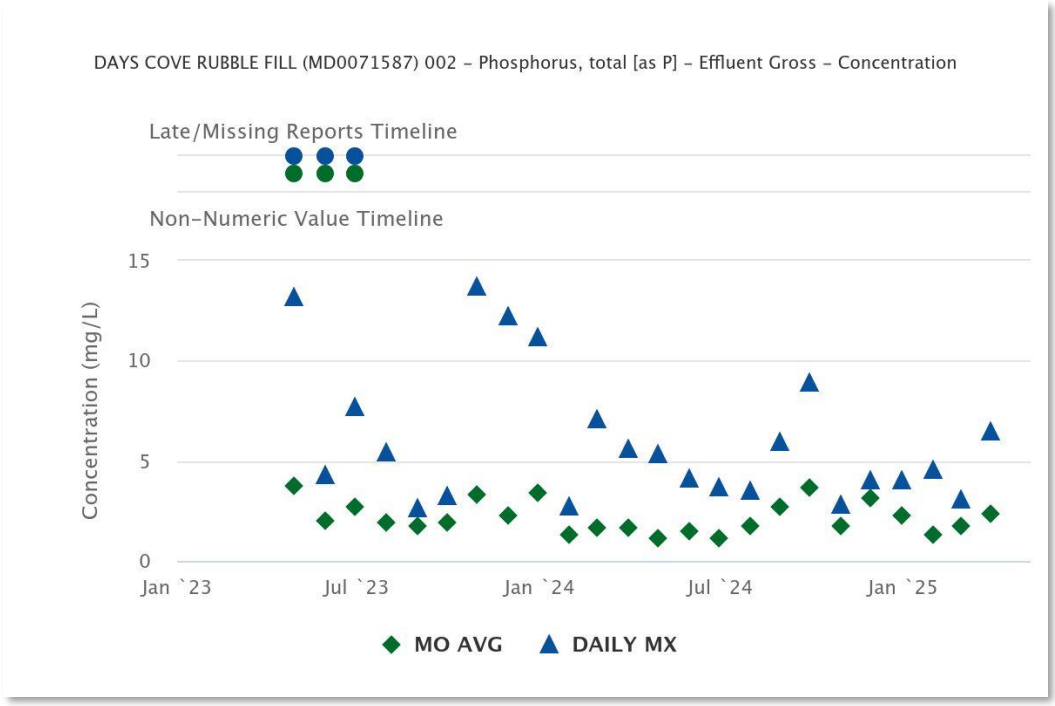


Figure 9 - Phosphorus concentrations at Outfall 002

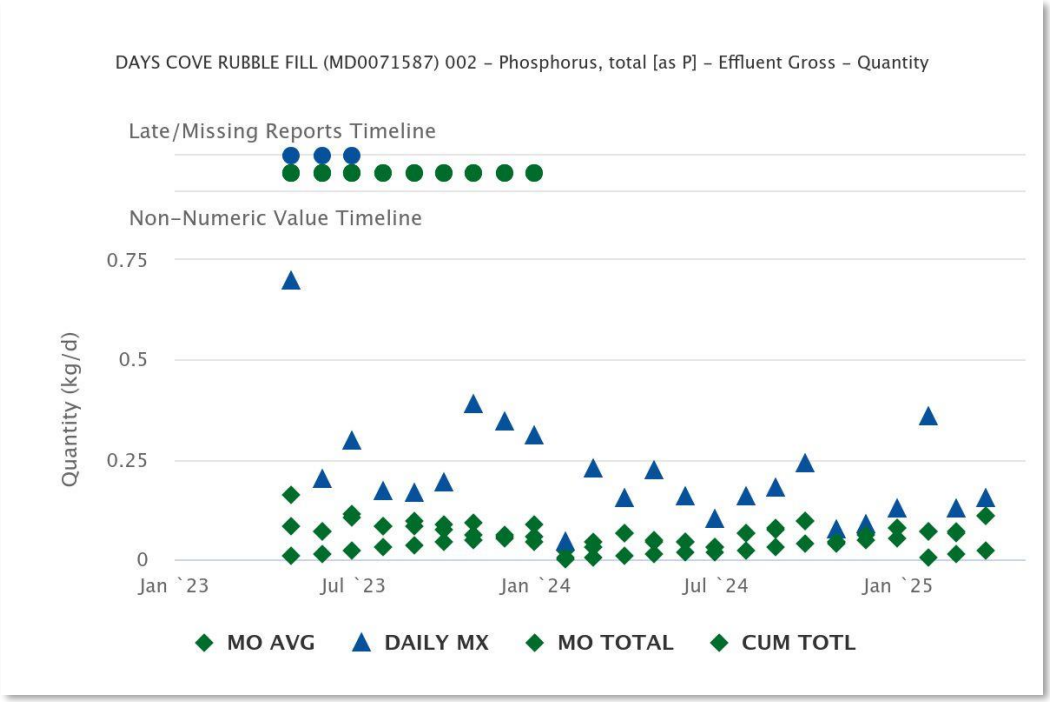


Figure 10 - Phosphorus quantity/load at Outfall 002

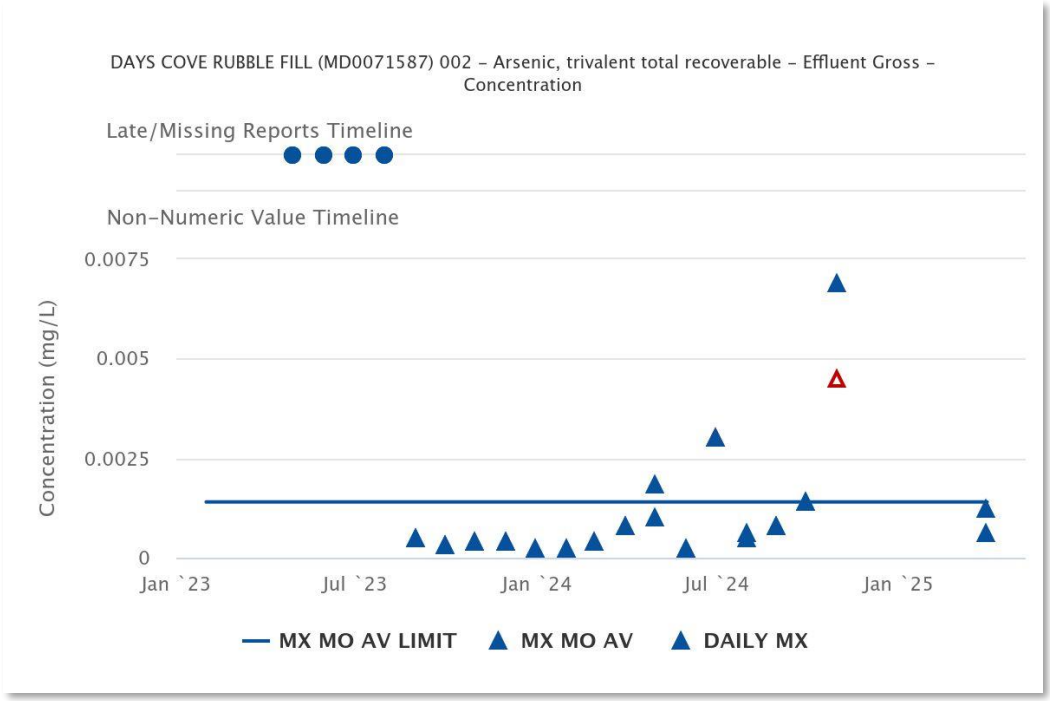


Figure 11 - Trivalent Arsenic concentrations at WWTP

Trivalent Arsenic concentrations at WWTP have shown exceedances on four occasions.

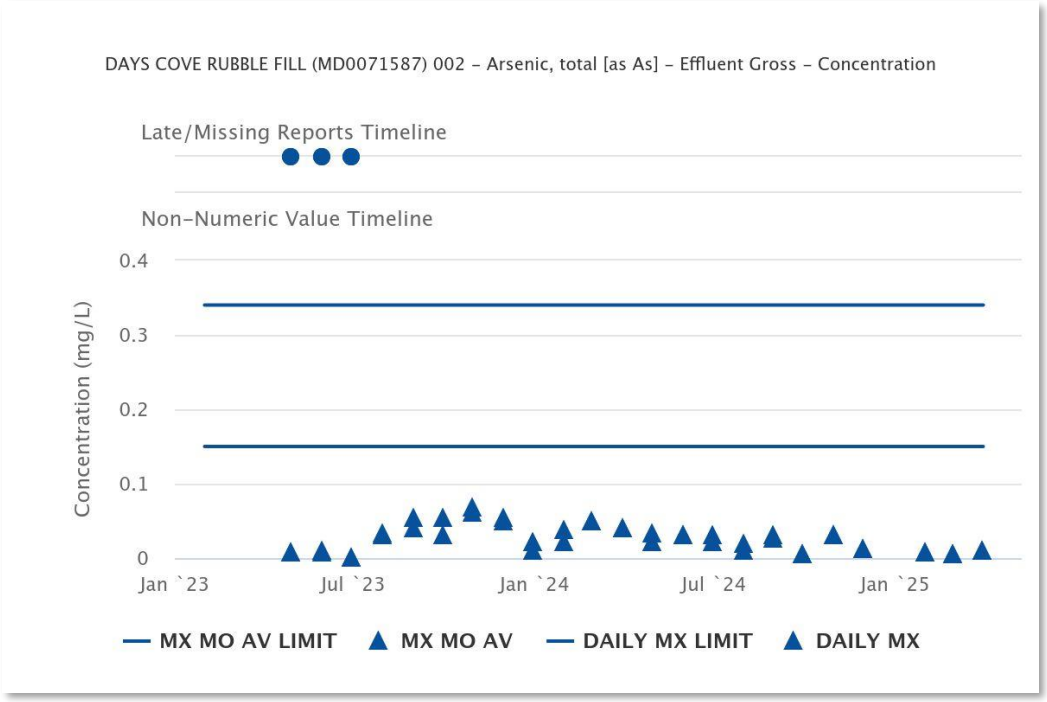


Figure 12 - Total Arsenic concentrations at WWTP

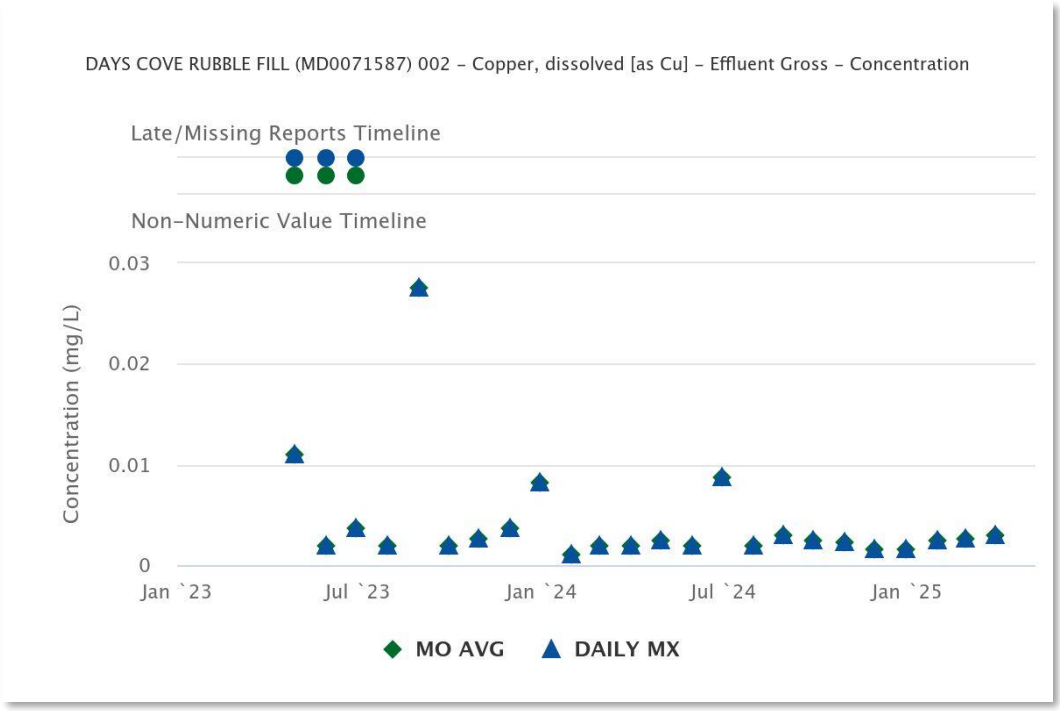


Figure 13 - Dissolved Copper concentrations at WWTP

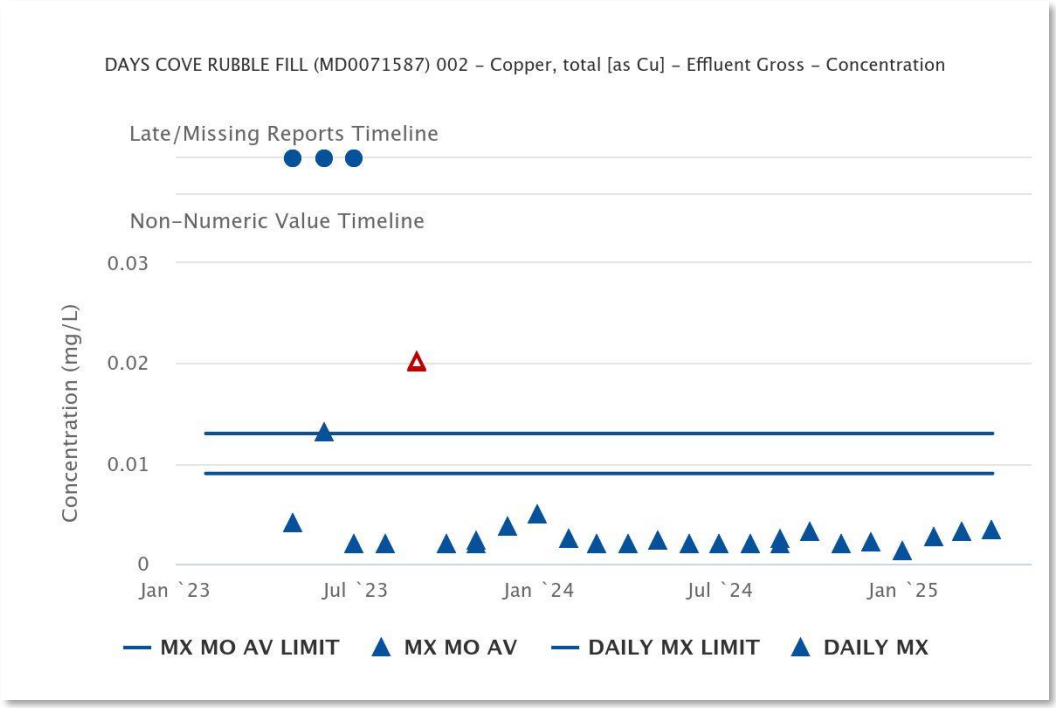


Figure 14 - Total Copper concentrations at WWTP

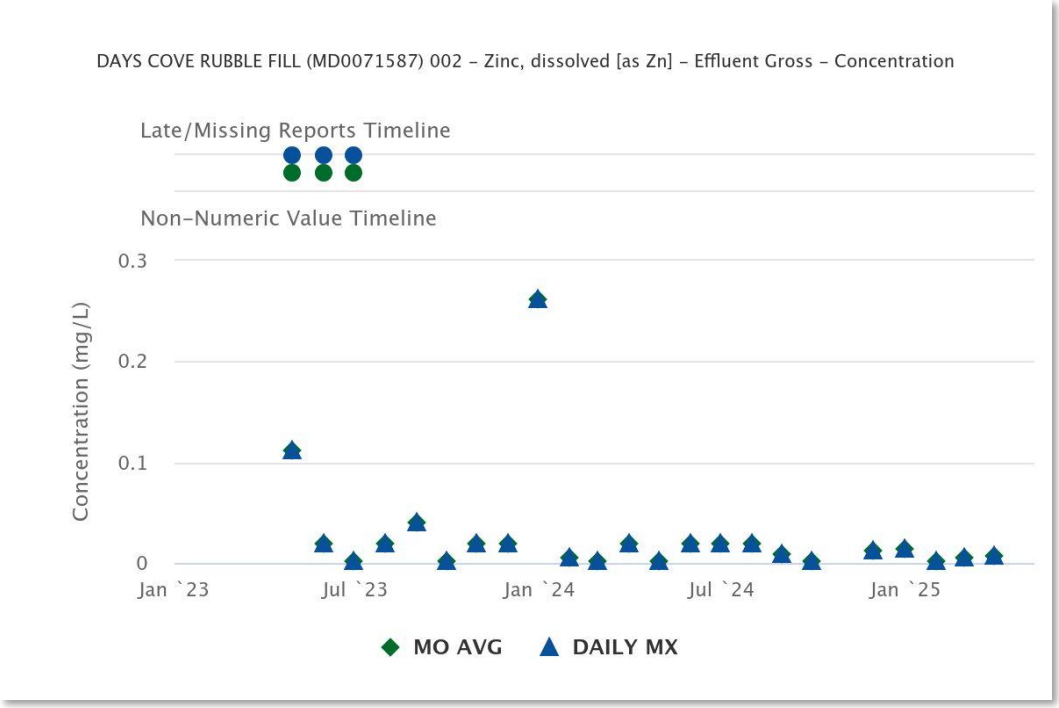


Figure 15 - Dissolved Zinc concentrations at WWTP

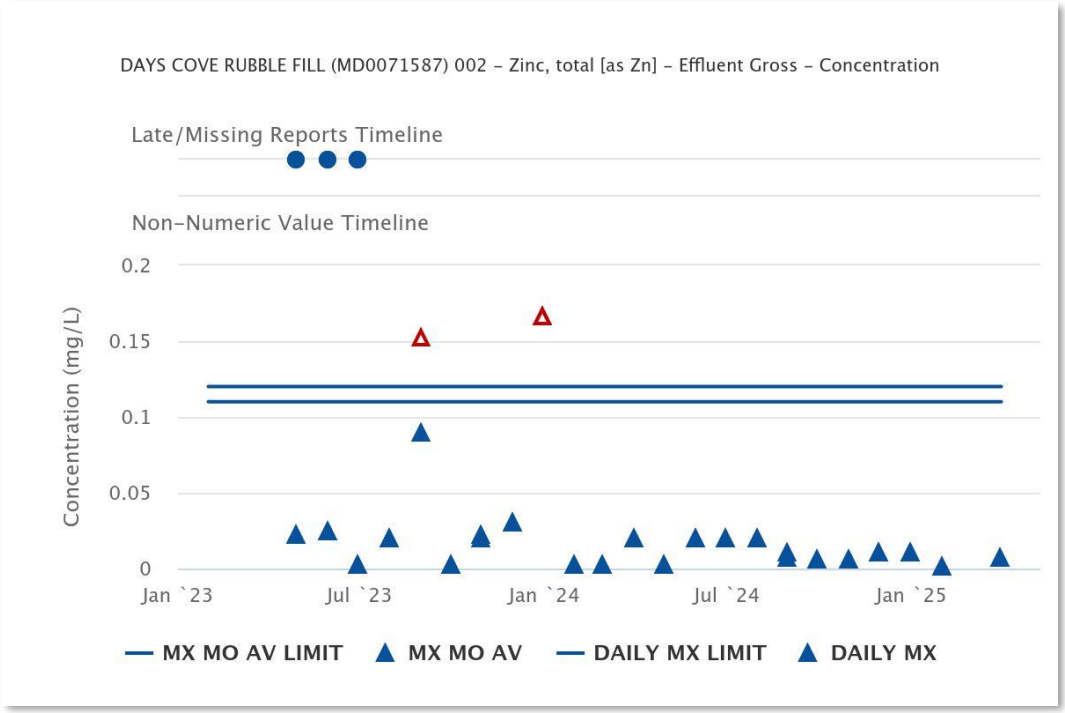


Figure 16 - Total Zinc concentrations at WWTP

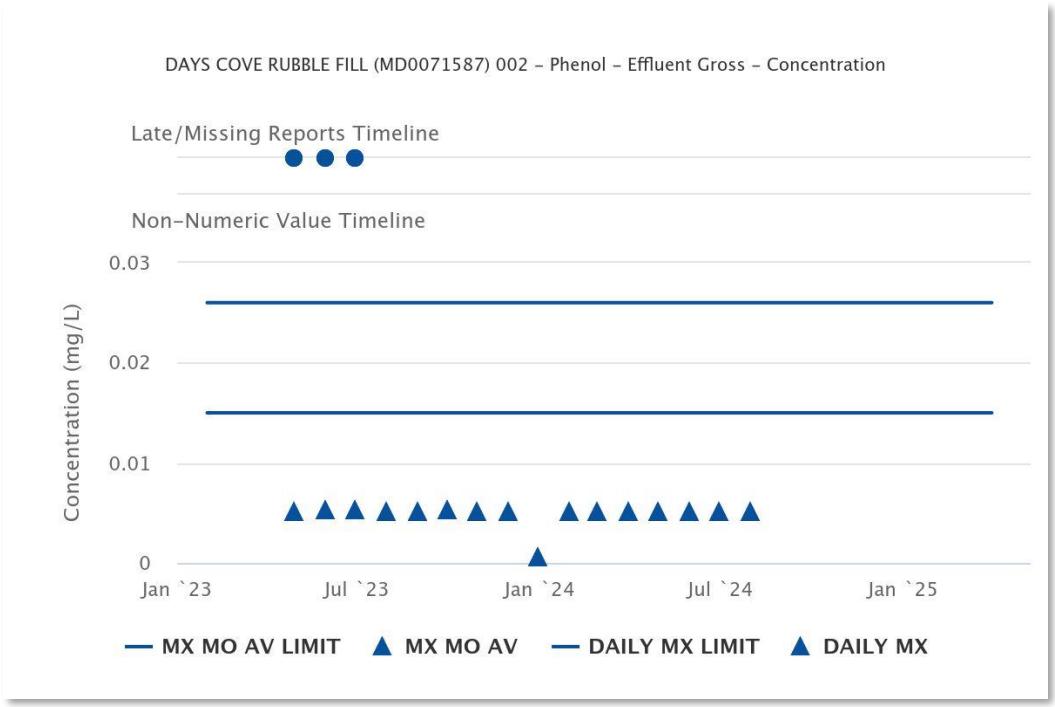


Figure 17 - Phenol concentrations at Outfall 002

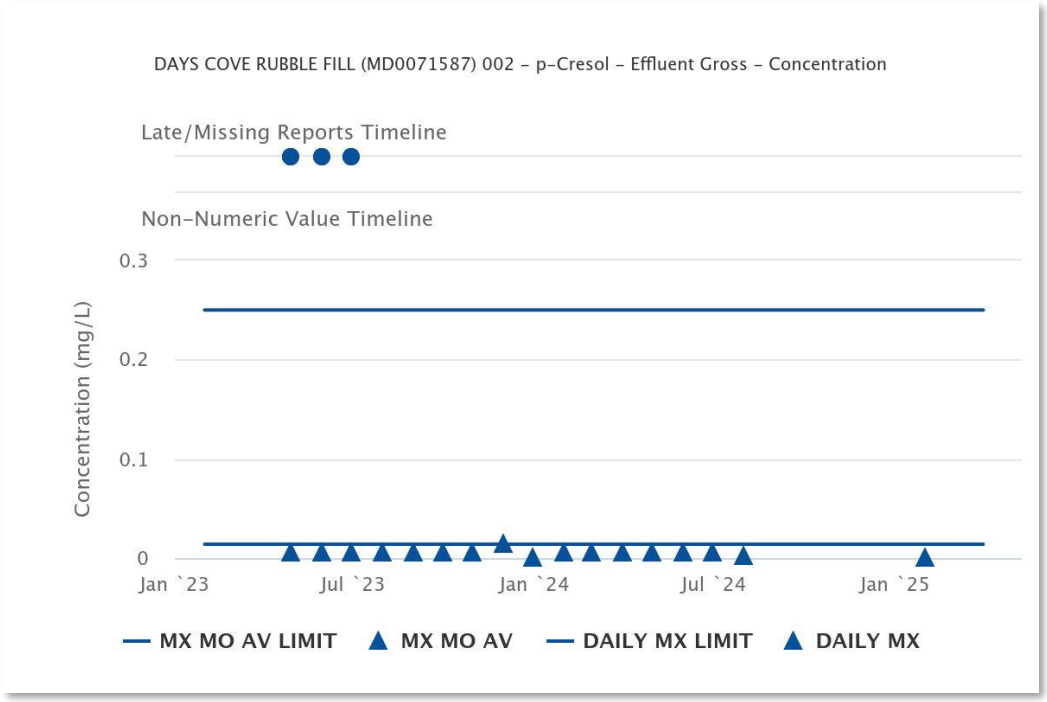


Figure 18 - p-Cresol concentrations at Outfall 002

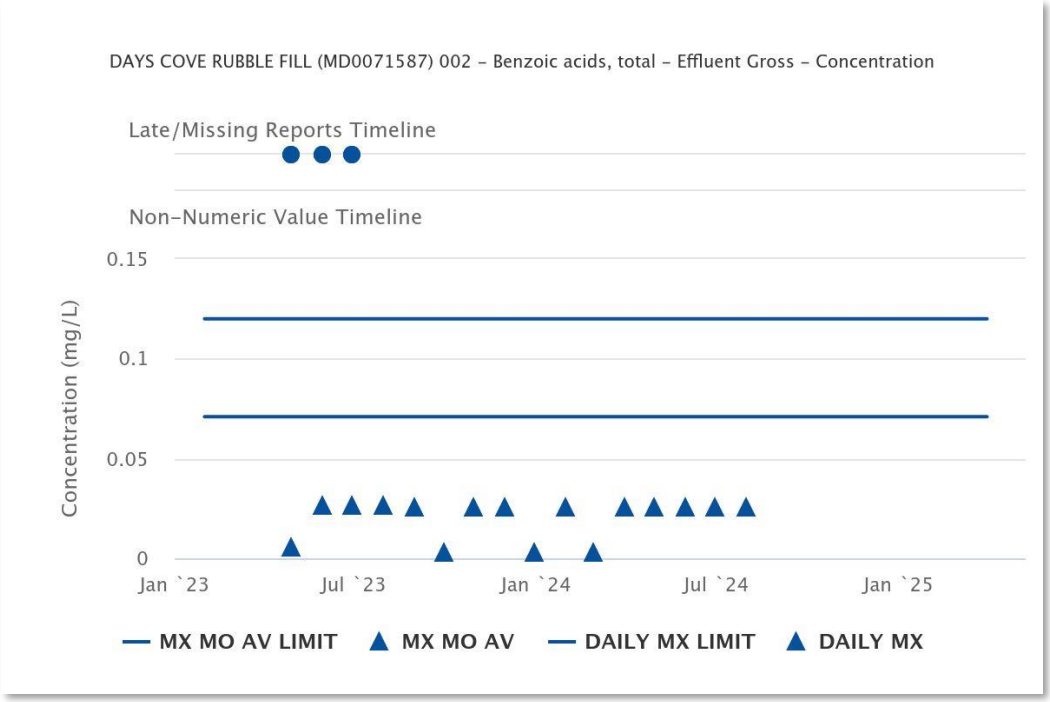


Figure 19 - Benzoic acids concentrations at Outfall 002

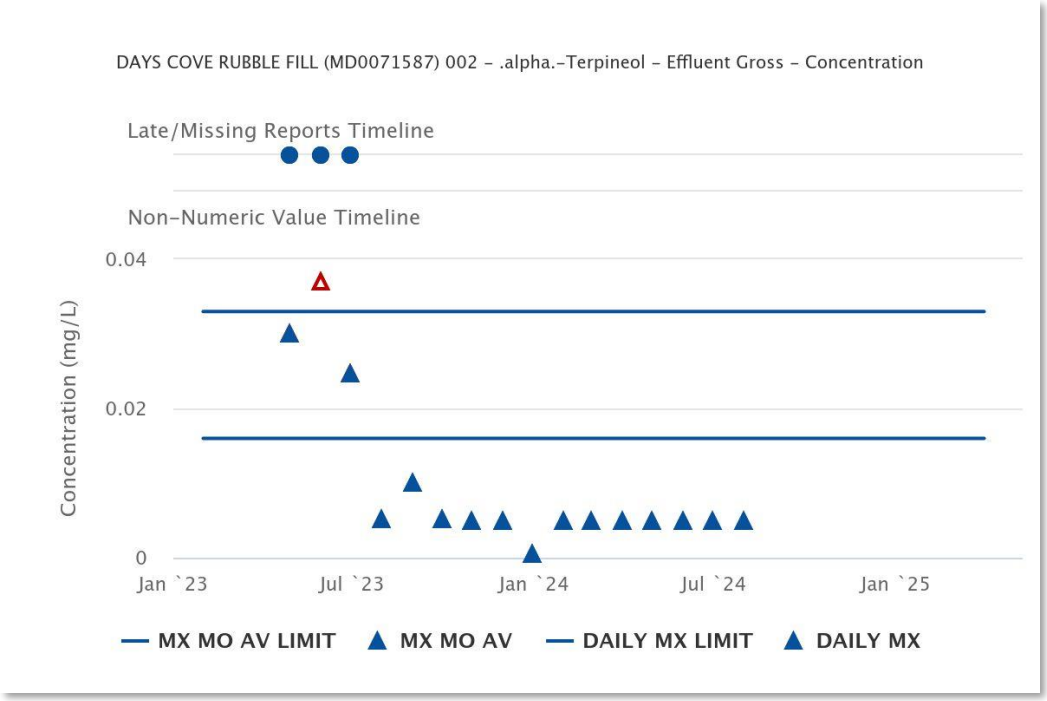


Figure 20 - .alpha.-Terpineol concentrations at Outfall 002

VII. Description of Receiving Stream(s)

The receiving waters are estuarine tidal, so low flow data is not applicable. The discharge occurs into the old mining pit which has flooded and empties into Gunpowder Falls at the head of Days Cove. Days Cove is located at the point of confluence between the adjacent Bird River and Gunpowder River (see Figure 2).

Map 3 - Area Map Showing Landfill, Old Mining Pit and Gunpowder Falls

I. Outfall Details

Table 1: Outfall Characteristics

Outfall or Monitoring Point #	Discharge Monitoring Location	Waste Streams Contributing to the Discharge	Average Flow (GPD)	Comments	Outfall Coordinates (in 1000 ft)	
					Northing	Easting
002	Outlet from wastewater treatment system[1]	Leachate, stormwater runoff	12,040	The average flow was calculated with DMR data. The permittee anticipates average flow to increase to 25,000 GPD.	630.5	1488.3
		Total	**12,040**			

[1] Some parameters are monitored either at the point where the discharge meets the receiving waters or within those waters.

II. Detailed Assessment of Liquid Waste

Table 2: Outfall 002 Waste Stream Characteristics

Type of Wastewater Discharged:	Leachate, stormwater runoff		
Treatment Unit:	Biological treatment, dissolved air floatation, ultrafiltration, reverse osmosis, disinfection *(Note: Permittee requesting ability to bypass ultrafiltration and/or reverse osmosis if those steps are not needed to meet permit limitations)*		
Discharge Type:	Continuous (unless hauled to WWTP)	**Period:**	Year-round, as needed
Potential Basis for Whole Effluent Toxicity Testing (Biomonitoring):	Biomonitoring studies, required by Special Condition K of the previous permit, were conducted at the facility between June 2023 and March 2024. Samples collected in December 2023 resulted in a finding of toxicity, but a subsequent retest in January of 2024 indicated no toxicity. The initial three samples collected in June 2023, September 2023, and March 2024 also showed no toxicity. Based on these results biomonitoring will not be required under the renewal permit.		

Assessment of Nutrients (Total Nitrogen (TN) & Phosphorus (TP) and Total Suspended Solids (TSS) in the Discharge

Total Nitrogen:
0.01204 mgd X 34.9 mg/L X 8.34 = 3.5 lbs/day
0.01204 mgd X 34.9 mg/L X 8.34 X 365 = 1,279 lbs/year

Note: The TN concentration (34.9 mg/L) and flow of 0.01204 mgd (12.040 gpd) were calculated using the submitted DMRs.

Total Suspended Solids
0.01204 mgd X 10.2 mg/L X 8.34 = 1.02 lbs/day
0.01204 mgd X 10.2 mg/L X 8.34 X 365 = 373.8 lbs/year or less than 1 ton/year.

Note: The TSS concentration (10.2 mg/L) and the flow of 0.01204 mgd (12,040 gpd) was calculated using the submitted DMRs.

Total Phosphorus:
0.01204 mgd X 5.77 mg/L X 8.34 = 0.07 lbs/day
0.01204 mgd X 5.77 mg/L X 8.34 X 365 = 26 lbs/year

Note: The TP concentration (5.77 mg/L) and the flow of 0.01204 mgd were calculated using the submitted DMRs.

Table 3: Outfall 002 Effluent Characteristics

Pollutant	Maximum Value		Average Value		Units		No. of Samples	Source of Data
	Conc.	Other	Conc.	Other	Conc.	Other		
Total Suspended Solids (TSS)	22	---	10.1	---	mg/L	---	---	DMRs
Total Nitrogen	---	---	34.8	---	mg/L	---	---	DMRs
Flow	---	12,254	---	8,842	---	gpd	---	Form 2C

Pollutant	Maximum Value		Average Value		Units		No. of Samples	Source of Data
	Conc.	Other	Conc.	Other	Conc.	Other		
Flow	---	---	---	12,040	---	gpd	---	DMR
Phosphorus	---	---	5.77	---	mg/L	---	---	DMR
Phosphorus	0.27	---	0.06	---	mg/L	---	36	Form 2C

Note: All DMRs are summarized in Section VI. However, items here that were used for calculations elsewhere are included in the above table.

III. Total Maximum Daily Load (TMDL) Status of the Receiving Waters from Outfall 002

Outfall 002 from the Days Cove Landfill discharges into the Bird River watershed (Basin Code 02130803) which in turn discharges into the Gunpowder River (Basin Code 0210801.) Ultimately, the discharge ends up in the Chesapeake Bay. This section lists the local and downstream impairments, TMDLs and delisted parameters according to Section 303(d) of the Clean Water Act.[2]

Category 5 – Impaired, TMDL required
In 2014, the 1st through 4th order streams in the Bird River watershed were listed as impaired for an unknown pollutant indicated by fish and benthic IBIs.

Category 4a – TMDL Completed
The *Total Maximum Daily Load of Polychlorinated Biphenyls in the Gunpowder River and Bird River Subsegments of the Gunpowder River Oligohaline Segment, Baltimore County and Harford County, Maryland* was approved on October 3, 2016. The document includes the Days Cove Landfill in the stormwater wasteload allocation but it is not identified as an industrial process source of PCBs.

The *Chesapeake Bay* Total Maximum Daily Load for Sediments, Nitrogen and Phosphorus issued on December 29, 2010, limits total (net) discharges of nitrogen, phosphorus and sediment that ultimat*el*y reach the bay. As discussed in Section VII of this fact sheet, Days Cove Landfill is not a significant source of sediment (less than a ton/year) or phosphorus (approximately 26 lbs/year).

Day's Cove requires an allocation of **380.5 lbs/yr** for total nitrogen. This is based on:
0.0125 mgd X 10 mg/L X 8.34 = 1.0425 lbs/day
0.0125 mgd X 10 mg/L X 8.34 X 365 = 380.5 lbs/year

Note: The TN concentration (10 mg/L) permit limit was taken from an amended leachate treatment plan engineering design report, which is the expected concentration when the treatment systems is running, and the flow of 0.0125 mgd (12,500 gpd) is the flow that the previous permit limits were based on.

However to be consistent with available allocations of **366.42 lbs/year** within the TMDL, this permit will based allocating the unused loads from their previous MM permit load, and the loads of two facilities no longer in operation:
MD0002348- Noxell Corporation - Baltimore (177.727 lbs/yr)
MD0069647- Harford County RRF- Joppa Waste (182.609 lbs/yr)
MDG498003- Day's Cove Rubble Landfill- Lateral Expansion (6.08503 lbs/yr)

[2] Under Section 303(d) of the Clean Water Act states are required to develop a list of impaired waters (known as the "303(d) list") for which technology-based regulations and other pollutant controls are not able to achieve water quality standards for that water body's designated use, and to establish Total Maximum Daily Loads (TMDLs) for such waters.

Delisted Parameters

The Gunpowder River watershed has delisted impairments for an unknown pollutant (as indicated by benthic IBI), TSS (for the submerged aquatic vegetation subcategory) and mercury in fish tissue. The delistings occurred in 2006 and 2010, respectively, for the first two pollutants. No action year is given for the mercury delisting.

Future TMDL Approvals

No future TMDLs are anticipated that would apply to the Days Cove Landfill.

IV. Antidegradation Review of the Receiving Stream for Outfall 002

This discharge does not go either directly or downstream to Tier II waters. Consequently, this permit has been constructed to protect and maintain the receiving streams' existing uses and the basic uses associated with its designated Use.

V. Environmental Justice

Maryland State law defines environmental justice (EJ) as "equal protection from environmental and public health hazards for all people regardless of race, income, culture, and social status. This facility lies within a census tract with an EJ Score in the 65.8th percentile of all tracts in Maryland. This EJ Score has been calculated by taking into consideration a combination of the following factors: pollution burden exposure, pollution burden environmental effects, sensitive populations, and socioeconomic indicators. A map of EJ Scores for each census tract is found at **https://experience.arcgis.com/experience/e4148f01acf743bf8ac1d2aa2dc0947f/page/MarylandEJ3_0#data_s=id%3AdataSource_5-19634ad3408-layer-4%3A1033**

For NPDES permits, the Program's policy is to perform an intensive evaluation for each individual NPDES permit specific to impacts relative to overburdened (high EJ) communities if the site is ranked in the 75th percentile or higher. This facility does not fit this criteria. However, all NPDES permits issued by the State have established permit limitations and other requirements to ensure discharges do not cause exceedance of any water quality criteria and to enforce all applicable technology standards.

More information about how MDE is implementing EJ across all administrations and programs can be found online at https://mde.maryland.gov/Environmental_Justice/Pages/Landing%20Page.aspx.

VI. Standards

Table 4: Technology Standards

#	Pollutant	Maximum Value		Average Value		Units		Regulatory Basis
		Conc.	Other	Conc.	Other	Conc.	Other	
1	Biochemical Oxygen Demand (BOD)	140	---	37	---	mg/L	---	40 CFR 445 Subpart B, 445.21. "Best practicable control technology currently available (BPT)""
2	Total Suspended Solids (TSS)	88	---	27	---	mg/L	---	"
5	Ammonia	10	---	4.9	---	mg/L	---	"
6	A-Terpineol	0.33	---	0.016	---	mg/L	---	"
7	Benzoic Acid	0.12	---	0.071	---	mg/L	---	"

#	Pollutant	Maximum Value		Average Value		Units		Regulatory Basis
		Conc.	Other	Conc.	Other	Conc.	Other	
8	ρ-Cresol	0.025	---	0.014	---	mg/L	---	"
9	Phenol	0.026	---	0.015	---	mg/L	---	"
10	Zinc	0.20	---	0.11	---	mg/L	---	"
11	pH		6 - 9		---	6 - 9	s.u.	"

Table 5: Water Quality Criteria

#	Pollutant	Maximum Value		Average Value		Units		Regulatory Basis
		Conc.	Other	Conc.	Other	Conc.	Other	
16	Dissolved Oxygen (DO)	not less than 5				mg/L		COMAR 26.08.02.03-3.C.(8) and 26.08.02.03-3.A.(4)
17	Ammonia	19.9		2.4		mg/L		COMAR 26.08.02.03-02.I.(5)
18	Phenol	---	---	4000	---	µg/L	---	COMAR 26.08.02.03-2G(4); (Toxic Substances Criteria for Ambient Water Quality Criteria – Organic Compounds); consumption of DW and organisms; Human Health criteria are average values.
19	Arsenic, Total	34	---	15	---	µg/L	---	COMAR 26.08.02.03-2.G.(1);69 (Toxic Substances Criteria for Ambient Surface Waters – Inorganic Substances) for Fresh Water
20	Arsenic, Inorganic		---	1.4	---	µg/L	---	COMAR 26.08.02.03-2.G.(1);69 (Toxic Substances Criteria for Ambient Surface Waters – Inorganic Substances); consumption of organisms; Human Health criteria are average values.
21	Copper	13	---	9	---	µg/L	---	COMAR 26.08.02.03-2.G.(1);69 (Toxic Substances Criteria for Ambient Surface Waters – Inorganic Substances)
22	Zinc	120	---	120	---	µg/L	---	"
23	pH		6.5; 8.5 (min; max)				Standard Units (s.u.)	COMAR 26.08.02.03-3C(4) and 26.08.02.03-3A(4)

VII. Overall Rationale for Effluent Limitations and Monitoring in the Draft Permit

The effluent limitation guidelines (ELGs) for the Landfills Point Source Category, classified in 40 CFR Part 445 apply to this facility. Based on information provided by the applicant, the subpart that applies specifically to the site is Subpart B, RCRA Subtitle D Non-Hazardous Waste Landfill, §445.20 through 445.24. The facility is considered to be an existing point source.

All the parameters specified by the ELGs and other pollutants of concern were checked for technology standards and/or water quality criteria (Tables 4 and 5 above) to determine appropriate limits, if needed. Then the TMDLs for receiving and downstream waters were evaluated to determine if they were applicable to this facility. Discharge limits, monitoring requirements, and special conditions in the previous permit were reviewed to determine if they were still appropriate for the facility. Based on its review, the Department determined many of the limits, monitoring requirements, and special conditions established in the previous permit will be continued. The renewal permit imposes some new requirements.

VIII. Outfall 002 Rationale for Effluent Limitations and Monitoring

This section provides the details of the proposed effluent limitations and monitoring. Discharge of wastewater is authorized only for Outfall 002. The previous permit had limits also for an Outfall 003, but that outfall has been eliminated.

In its evaluation of appropriate monitoring and limitation requirements, the Department reviewed past monitoring data for the site: from the application and from supplemental data provided by the permittee through NetDMR. The effluent from the facility was hauled offsite until April 2023 ago but the permittee has conducted sampling of the effluent from various points in treatment system: the outlets of the DAF unit, the ultra filtration unit and the reverse osmosis unit. This sampling data was provided by the permittee as a supplement to the application.

BOD: This limit is continued from the previous permit. The ELG is 140 mg/L daily maximum and 37 mg/L maximum monthly average. There is no water-quality standard, but the writer of the previous permit included a dissolved oxygen limit as an index of water quality for BOD. This permit will require the permittee to take action and determine potential impacts of BOD discharge by modeling the downstream impacts (see Special Condition S).

Dissolved Oxygen (DO): This condition has been continued from the previous permit. The previous permit established a DO limit of a 5 mg/L minimum (the water quality standard.) The sampling point for DO is in the old mining pond no farther than 20 feet off the shore at a point directly downhill from the discharge. A monthly frequency is established for the cooler months of the year. During the warmest months (June, July, August), the monitoring frequency is once per week. The permit includes a footnote allowing excursions if the pond background levels (as measured on the opposite side of the pond) are below the standard. For data entry purposes, a measurement called DO Difference is established for this permit, similar to the established Temperature Difference parameter. As long as the effluent DO concentration is greater than the background DO, the effluent is in compliance.

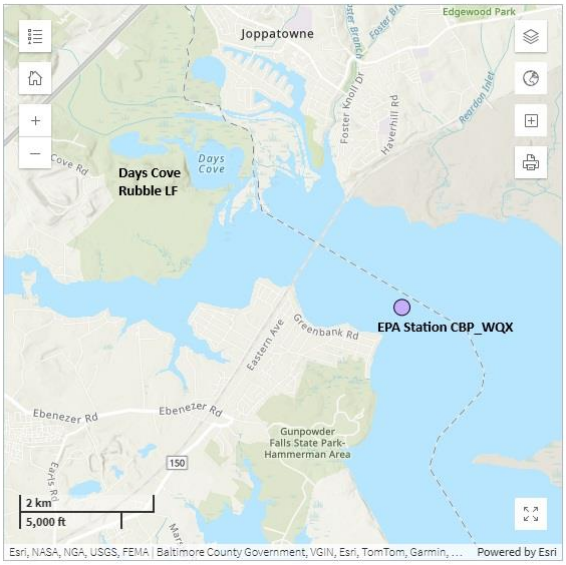
TSS: This limit is continued from the previous permit. The ELG is 88 mg/L for the daily maximum and 27 mg/l for the monthly average. Because the permittee was considering treating by reverse osmosis, the previous permit writer adopted 30 mg/L for the daily maximum and 10 mg/l for the monthly average as the technology standard. There is no water quality standard for suspended solids. This leaves the Bay TMDL for consideration. The previous permit writer determined that this would not be a measurable source to the Bay because of the configuration of the former mining pit pond – that is, the old mining pit outlet is so far from the point of discharge there would be no significant tidal flushing and passing on of its sediment downstream. Even if all of the effluent were to reach the old mining pit, at the proposed flow and TSS limits, less than a ton of solids will deposit in the old mining pit yearly (calculated above). At this rate, the pond will never fill and certainly not pass on its sediment downstream.

Ammonia: Two sets of limits are included for ammonia. One is a technology standard applied at the wastewater treatment

plant, and the other are water quality based limits at the point where the wasters discharge to the old mining pit. The water quality limit has been updated to reflect changes in the criteria in COMAR. However the technology based limits (the ELG mentioned above) has not changed and is for 10 mg/L for a daily maximum and 4.9 mg/L for the monthly average. The monitoring point for the technology based ELG limits is monitored at the outlet of the treatment system. The previous permit writer evaluated the need for a separate set of limits, based on water quality, at the point of discharge to the old mining pit.

The water quality criteria for ammonia are listed in COMAR 26.08.02.03-2.H and I. For determining chronic toxicity limits under the previous permit, the table for fresh water early life stages was used, since this pond is at the head of a wetland. However, COMAR 26.08.02.08 specifies an upper boundary point for the Gunpowder River Oligohaline that is upstream of Days Cove, which indicates that the receiving waters for this facility is classified as estuarine. The receiving waters are Use Class II and tidal which further suggests that this body of water is estuarine. Based on this assessment COMAR 26.08.02.03-2. J and K were used to determine chronic and acute limits.

Because the toxicity of ammonia is dependent on temperature, salinity and pH, it was necessary to evaluate the ambient conditions which occur in the receiving water in order to determine the applicable criteria. Temperature and pH data were obtained through the EPA water quality monitoring project https://mywaterway.epa.gov/monitoring-report/STORET/CBP_WQX/CBP_WQX-WT2.1/ from station CBP_WQX for the years 2011-2020 (refer to Map 4).



Map 4- Station used to provide pH and temperature Values

Two sets of limits were developed: one based on the average summer temperature and one based on the average winter temperature. From this data the average pH and temperature were calculated (refer to Table 6). The average pH was calculated based on the pH measurements taken year-round. The temperature average was calculated for the summer months (May through October) and a separate value was calculated for the winter months (November through April).

Table 6- Calculation of Water Criteria for Ammonia

Month	pH (s.u.) 2011-2020 Average	Temp (C) 2011-2020 Average	COMAR 26.08.02.03-2 Acute (mg/L) using 10ppt Salinity	COMAR 26.08.02.03-2 Chronic (mg/L) using 10ppt Salinity
Winter	7.9	6.22	19.0	2.9
Summer	7.9	27.5	3.1	0.47

As tabulated in Table 6, the water quality based ammonia criteria for this permit are as follows:

Summer Limits: The acute concentration is 3.1 mg/L and the chronic concentration is 0.47 mg/L.

Winter Limits: The acute concentration generated is 19.0 mg/L and the chronic concentration is 2.9 mg/L.

Total Nitrogen: The previously permitted interim nitrogen load was 380.5 lbs/year (see Section III calculations). However, to be consistent with available allocations of **366.42 lbs/year** within the TMDL, this permits final nutrient load will be based on the calculations located in section III of this factsheet.

Because of the treatment plant's current setup and operational efficiency treating the leachate the permittee is proposing to increase their flow up to 25,000 gpd. At their current flow rate and TN concentration they create a TN load of 1,279 lbs/year (see calculations in Section II). Increasing the flow up to 25,000 gpd will increase the total nitrogen load even further (see below calculation).

TN using Average Annual Flow of 25,000 gpd (proposed flow rate increase)
0.025 mgd X 34.8 mg/L X 8.34 = 7.25 lbs/day
0.025 mgd X 34.8 mg/L X 8.34 X 365 = 2,648.3 lbs/year

Note: The TN concentration (34.8 mg/L) was calculated using the submitted DMRs.

Currently, Day's Cove has a total nitrogen TMDL allocation of 366.42 lbs/year that the permittee will need to meet (see Section III). Therefore, the permittee will need to utilize alternative uses (outlined in Special Condition Paragraph O) for the effluent when the 366.42 lbs/year limit is reached. The discharge of effluent to the Back River Wastewater Treatment Plan does not count against the permit's annual maximum nitrogen loading limit.

Total Phosphorus: This condition is continued from the previous permit. Phosphorus is added to the influent in small amounts during treatment because rubble landfills typically have low levels of nutrients in their leachate. Based on the assessment of phosphorus, it is not considered a pollutant of concern for this facility.

a-Terpineol: This limit is continued from the previous permit. Monitoring for this constituent is required by 40 CFR Part 445 Subpart B. It is probably associated more with municipal solid waste landfills, but the guidelines make no distinction. The ELG calls for 0.033 mg/l daily maximum, 0.016 mg/l monthly average. There are no water quality criteria for this constituent. We evaluated the DMR data in section VI and determined no adjustments to the limits or monitoring were required.

Benzoic acid: These limits, a monitoring frequency of once per month and a grab sample-type are continued from the previous permit. Required by 40 CFR Part 445 Subpart B. It is probably associated more with municipal solid waste landfills, but the guidelines make no distinction. The ELG calls for 0.12 mg/l daily maximum, 0.071 mg/l monthly average. There are no water quality criteria for this constituent. We evaluated the DMR data in section VI and determined no adjustments to the limits or monitoring were required.

p-Cresol: These limits, a monitoring frequency of once per month and a grab sample-type are continued from the previous permit. Required by 40 CFR Part 445 Subpart B. It is probably associated more with municipal solid waste landfills, but the guidelines make no distinction. The ELG calls for 0.25 mg/l daily maximum, 0.014 mg/l monthly average. There are no water quality criteria for this constituent. We evaluated the DMR data in section VI and determined no adjustments to the limits or monitoring were required.

Phenol: These limits, a monitoring frequency of once per month and a grab sample-type are continued from the previous permit. Required by 40 CFR Part 445 Subpart B. It is probably associated more with municipal solid waste landfills, but the guidelines make no distinction. The ELG calls for 0.026 mg/l daily maximum, 0.015 mg/l monthly average. The water quality criteria (COMAR 26.08.02.03-2, Table 4) are 4 mg/L and 300 mg/L. We evaluated the DMR data in section VI and determined no adjustments to the limits or monitoring were required.

Total Arsenic: This limit is continued from the previous permit. This constituent was reported at elevated levels in the

application data for the previous permit; therefore, the writer of the previous permit considered it advisable to monitor arsenic. The application for the proposed permit presents a maximum daily concentration of 0.84 mg/L and a long-term average value of 0.28 mg/L. The former value exceeds the acute criterion for aquatic life of 0.34 mg/L and the latter suggests that the chronic criterion for aquatic life of 0.15 mg/L may potentially be exceeded. Therefore, the limits and sampling frequency are continued from the previous permit. The effluent must meet water quality standards of 340 ug/l daily maximum and 150 ug/l monthly average. Though based on soluble metal, these would be applied as total arsenic limits because what is released as insoluble metal may become soluble in the receiving water column. We evaluated the DMR data in section VI and determined no adjustments to the limits or monitoring were required.

Inorganic Arsenic (Trivalent Arsenic): This limit is continued from the previous permit. To protect organism consumption, COMAR 26.08.02.02-3.G directs us to limit trivalent arsenic, and that would be at an average of 1.4 ug/l. Because of the difficulties obtaining a sample and the further difficulty of finding a lab to test for trivalent arsenic, the permittee requested the monitoring frequency be reduced. We evaluated the DMR data in section VI and identified three exceedances. Despite their request for reduction of limits and/or monitoring we determined that the limits were appropriate and effective and thus the monitoring frequency cannot be reduced unless further compliance is achieved.

Copper: This limit is continued from the previous permit. Copper is extremely toxic to aquatic life and application data shows concentrations in excess of water quality standards. Since there are no provisions for mixing in accordance with the specifications in COMAR 26.08.02.05, the effluent must meet water quality standards (9 ug/l avg/, 13 ug/l max.). The permit will allow monitoring at the point of discharge because of ion exchange capacity of soils, whether it happens as the wastewater flows overland or percolates into ground. We evaluated the DMR data in section VI and determined no adjustments to the limits or monitoring were required.

Zinc: These limits, a monitoring frequency of once per month and a grab sample-type are continued from the previous permit. Zinc is included in the proposed permit because it is required in the ELG. The ELG is a 0.2 mg/L daily maximum, and a 0.11 mg/l monthly average. Water quality criteria are 0.12 mg/l for both acute and chronic conditions. The more stringent of these limits must be included in the permit. So, the daily maximum will be 0.12 mg/l max and the monthly average 0.11 mg/L. We evaluated the DMR data in section VI and determined no adjustments to the limits or monitoring were required.

pH: This limit is continued from the previous permit. The ELG allows a range of 6.0 to 9.0 s.u. Maryland's water quality standards are 6.5 to 8.5 s.u. Since there are no mixing zone criteria for pH, the previous fact sheet stated that the dispersed nature of the discharge should prevent an excursion with a range of 6 to 9. However, to preserve the assumption of 7.5 s.u. used in developing the ammonia limit, the allowable range can be only 6 to 7.5 s.u. We evaluated the DMR data in section VI and determined no adjustments to the limits or monitoring were required.

IX. Rationale for Special Conditions in the Draft Permit

B. **DEFINITIONS** - The condition has been updated from the previous permit. Definitions were selected from a standard list so that only the definitions relevant to this permit are included.

C. **TOXIC POLLUTANT REPORTING** - This condition is continued from the previous permit. It directs the permittee to notify the Department upon the release of any toxic pollutants not anticipated in the permit review process (standard inclusion).

D. **REMOVED SUBSTANCES** - This condition is continued from the previous permit. The text has been updated for language and to reflect current standards and practices. It assures notification of the Department upon disposal of removed substances so that pollutants do not reach State waters by some

other route (standard inclusion, but activated only if the Department determines a potential need for this information).

E. **ANALYTICAL LABORATORY** - This condition is continued from the previous permit. It is included in the event the Department needs to know who is conducting testing (standard inclusion).

F. **WASTEWATER OPERATOR CERTIFICATION** - This condition is continued from previous permit. It is required under COMAR 26.06.01 and ensures that only a properly trained person is operating the wastewater treatment system. The certification is for the operation of a Class 7 treatment facility.

G. **FLOW MONITORING** - The condition is new for the renewal permit. The requirement attempts to assure that flow is competently monitored (standard inclusion.)

H. **FLOW BASIS FOR ANNUAL DISCHARGE PERMIT FEE** - This condition is continued from the previous permit. It was added to all new/renewal permits to improve fee determinations. The requirement assures the Department receives accurate flow information on which to base the annual feet.

I. **REAPPLICATION FOR A PERMIT** - This condition is continued from the previous permit and assures that the Department receives applications in time to reissue permits before expiration.

J. **PERMIT REOPENER FOR TOTAL MAXIMUM DAILY LOAD (TMDL)** - The condition is continued from the previous permit but has been revised with updated language and for current site conditions. It allows the permit to be reopened if a TMDL is issued for the watershed in which the site is located and alerts the permittee that finalization of a TMDL is cause to reopen the permit. This permit may also be reopened in response to any update of the Chesapeake Bay TMDL.

K. **BIOMONITORING PROGRAM** – As noted in Table 2, based on the previous permit's biomonitoring results this condition has been marked as [Reserved].

L. **TOXICITY REDUCTION EVALUATION** - The condition is continued from the previous permit with updated language. If toxicity test data indicates unacceptable, acute or chronic effluent toxicity, this requirement sets forth the steps to be taken to identify and determine the cause of toxicity and implement necessary control measures (standard inclusion).

M. **MIXING ZONES AND POLLUTION PREVENTION** - This condition is [Reserved] which is continued from the previous permit.

N. **PROTECTION OF WATER QUALITY** – This condition puts the permittee on notice that there are occasions when they may be held accountable for failure to comply with state water quality standards regardless of whether there is a specific limit in the permit. The condition is continued for the renewal permit.

O. **ADDITIONAL NITROGEN RESTRICTIONS** – This condition is continued from the previous permit. It is included to ensure that an offset is obtained by the permittee. The language in the renewal permit was updated to make it clear that the discharge of effluent to the Back River Wastewater Treatment Plan does not count against the permit's annual maximum nitrogen loading limit.

P. **USE OF TREATED WASTEWATER FOR ALTERNATE PURPOSES** – This condition is continued from the previous permit. Authorizes the permittee to use treated effluent from the wastewater treatment facility for dust control or irrigation of vegetation. The language in the renewal permit was updated to include a requirement for a volume log to be kept by the permittee.

Q. **USE OF SUFFICIENTLY SENSITIVE TEST METHODS** – This condition assures that the permittee analyzes samples with test methods sensitive enough to detect pollutants at or below their permit limits. While its terms have always been required, the addition of this condition is new to this renewal, per the Department's recent decision to include it in all NPDES permits.

R. **ADDITIONAL MONITORING** – The condition is new for this permit. Maryland is conducting testing and requiring testing by POTWs and industrial facilities in order to identify sources of PFAS in the state. The permittee is required to test for PFAS or else provide a technical report explaining that no PFAS compounds are used on the site or could be found in the discharges.

S. **EVALUATION OF BOD IMPACTS**- This condition is new for this permit. It was added as a way to identify the potential downstream impacts of BOD discharges from the facility. The results of the model will be used to determine if permit limits or continued monitoring will be required for BOD in future permits.

T. **STORMWATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES** –The applicant now has 20-SW permit coverage, with registration number 20SR3374. This condition requires that the permittee maintain their general stormwater permit coverage. A SWPPP (with additional requirements under SARA Title III, Section 313) is a requirement of the 20-SW.

X. Final Determination and Response to Comments

Following publication of the tentative determination, the Department received comments adverse to the draft permit. The Department has crafted a formal Response to Comments (RTC) document which addresses those comments prior to publishing a final determination. Any inconsistencies between this fact sheet and the RTC document shall be resolved in favor of the RTC document.