ARM Group LLC
Engineers and Scientists

December 16, 2024

Sara Haile, Regulatory and Compliance Engineer
Construction & Maintenance Section
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230

Re: Renewal of Groundwater Discharge
Permit #2019-GWD-2311
Days Cove Rubble Landfill
Original Cell with Vertical Expansion
Baltimore County, Maryland
ARM Project M08101

Dear Ms. Haile:

On behalf of Days Cove Reclamation Company (DCRCo), ARM Group LLC (ARM) herein submits the enclosed Groundwater Discharge Permit Application renewal for Unlined Rubble Landfills, for the closed, inactive Original Cell with Vertical Expansion at the Days Cove Rubble Landfill, to the Maryland Department of the Environment (MDE).

The Original Cell with Vertical Expansion is a closed, inactive rubble landfill facility, last receiving waste materials in May 1996. This renewal application is submitted in accordance with the Code of Maryland Regulations (COMAR) 26.08.04.

Enclosed you will find the completed Groundwater Discharge Permit Application for Unlined Rubble Landfills (Form #MDE/WAS/PER.002); an updated Site Location Map (Figure 1); copies of the latest groundwater sample results, obtained for the downgradient well DCMW-5, from September 2014 through September 2024; and the narrative summary of the most recent Water Quality Summary Report for the Original Cell with Vertical Expansion, dated June 2024 and previously submitted to the MDE.

We look forward to your timely review of this renewal of the existing Groundwater Discharge Permit, and appreciate your assistance with this matter. If you have questions regarding any information covered in this document please do not hesitate to contact the undersigned at (717)-508-0538.

Respectfully Submitted,
ARM Group LLC

Michael D. Olson, E.I.T.
Project Engineer

Craig P. Schriner, P.E.
Project Manager

Enclosures (3):

1. Groundwater Discharge Permit Application
2. Figure 1 – Site Location Map
3. Recent Groundwater Quality Analytical Results/Report
4. Environmental Justice Score

cc:

Mr. Darren Hunt, DCRCo (w/ enclosures)

Groundwater Discharge Permit Application

MARYLAND DEPARTMENT OF THE ENVIRONMENT

Land Management Administration ● Solid Waste Program
1800 Washington Boulevard ● Suite 605 ● Baltimore Maryland 21230-1719
410-537-3315 ● 800-633-6101 x3315 ● www.mde.maryland.gov

Groundwater Discharge Permit Application For Unlined Rubble Landfills

Authority: Title 9, Environment Article, Annotated Code of Maryland, and Code of Maryland Regulations (COMAR) 26.08.04

Application for: ☐ **New Permit** ☒ **Renewal Permit**

Existing Permit No. 2019 **-GWD-** 2311 **Issued Date:** 04 / 14 / 2020 **Expiration Date:** 04 / 13 / 2025

Applicant's Legal Name: Days Cove Reclamation Company

Applicant's Status: ☐ **Individual** ☒ **Corporation** ☐ **Government** ☐ **Other:** _____

Corporation or Government Federal Tax Identification No.: 52-1801399

Maryland State Department of Assessments and Taxation (SDAT) ID No.: D03521101

Please note that a business/entity must be registered to do business in Maryland before a permit can be issued. The business or entity's information provided in this application must match the information in the SDAT register.

Proof of workers' compensation coverage is required under § 1-202 of the Environment Article. Please provide one of the following:
(1) A copy of a Certificate of Compliance issued by the Maryland Workers' Compensation Commission; or
(2) Workers' Compensation Insurance Policy/Binder Number: Chesapeake Employers Insurance Policy #396607022

Applicant's Mailing Address: 6425 Days Cove Road **City:** White Marsh **State:** MD **Zip Code:** 21162

Applicant's Telephone No.: (410) 335-3778 **Facsimile No.:** (410) 335 - 4168

Emergency Contact Name & Title: Darren Hunt, Director of Operations **Telephone No.:** (410) 335-3778

Facility/Site Name: Days Cove Rubble Landfill Original Cell with Vertical Expansion

Facility/Site Address: 6425 Days Cove Road **City:** White Marsh **State:** MD **Zip Code:** 21162

County: Baltimore **Maryland Grid Coordinates:** 192,069.54 N / 453,761.64 - _____

County Zoning Map No.: 10J/10K **Lot/Parcel No.:** 73/106 **Deed/Liber/Folio No.:** 8192-16

State Legislative District: 07 **Local Council/Election District:** 5/2

Bay Tributary Watershed Code: 02130803 **Latitude/Longitude (Deg/Min/Sec):** 39 - 23 - 03 N/76 - 22 - 40 W

Site Acreage: 133.8 acres **Landfill Acreage:** 24 acres (Approximate-Original Cell only)

Nature of Business (describe briefly): Previous landfilling operations of construction and demolition waste (rubble) for the reclamation of a surface mine area. Last waste accepted May 1996.

List Other Environmental Permits Held For the Site: (e.g., NPDES-surface water; PSD-air emissions; RCRA-hazardous waste, etc).

Groundwater Discharge Permit- Horizontal Expansion: 2021-DP-3166 ; NPDES Permit #MDG-49, Reg. #00-MM-8003; Surface Mining License: 20-SL-0513; Refuse Disposal Permit: 2014-WRF-0592 (Lateral Expansion); Scrap Tire Permit: 2024-RSC-09137; State Discharge Permit - WWTP: 12DP3782, NPDES Permit #MD0071587; NPDES Industrial Stormwater Permit: 12SR3374; Surface Mining Permit: 86-SP-0236-C

Wastewater (Leachate) Description:

Wastewater is generated from the previous landfilling operations of the construction and demolition (rubble) waste, and through infiltration and percolation, is discharged to the groundwater.

Flow Calculations:

The flow estimated for discharge by means of infiltration or percolation is 9,500 gallons per day.

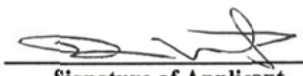
Groundwater Characteristics

(Attach Latest Groundwater Sample Results)

Map Of The Facility

This application must be accompanied by a copy of a U.S. Geological Survey topographical map or road map with a scale of 1" = 2000 feet, showing the exact location of the facility.

By signing this form, I the applicant or duly authorized representative, do solemnly affirm under the penalties of perjury that the contents of this application are true to the best of my knowledge, information, and belief. I hereby authorize the representatives of the Department to have access to the site of the facility for inspection and to records relating to this application at any reasonable time. I acknowledge that depending on the type of facility applied for, other permits or approvals may be required.



Signature of Applicant

12/16/24

Date

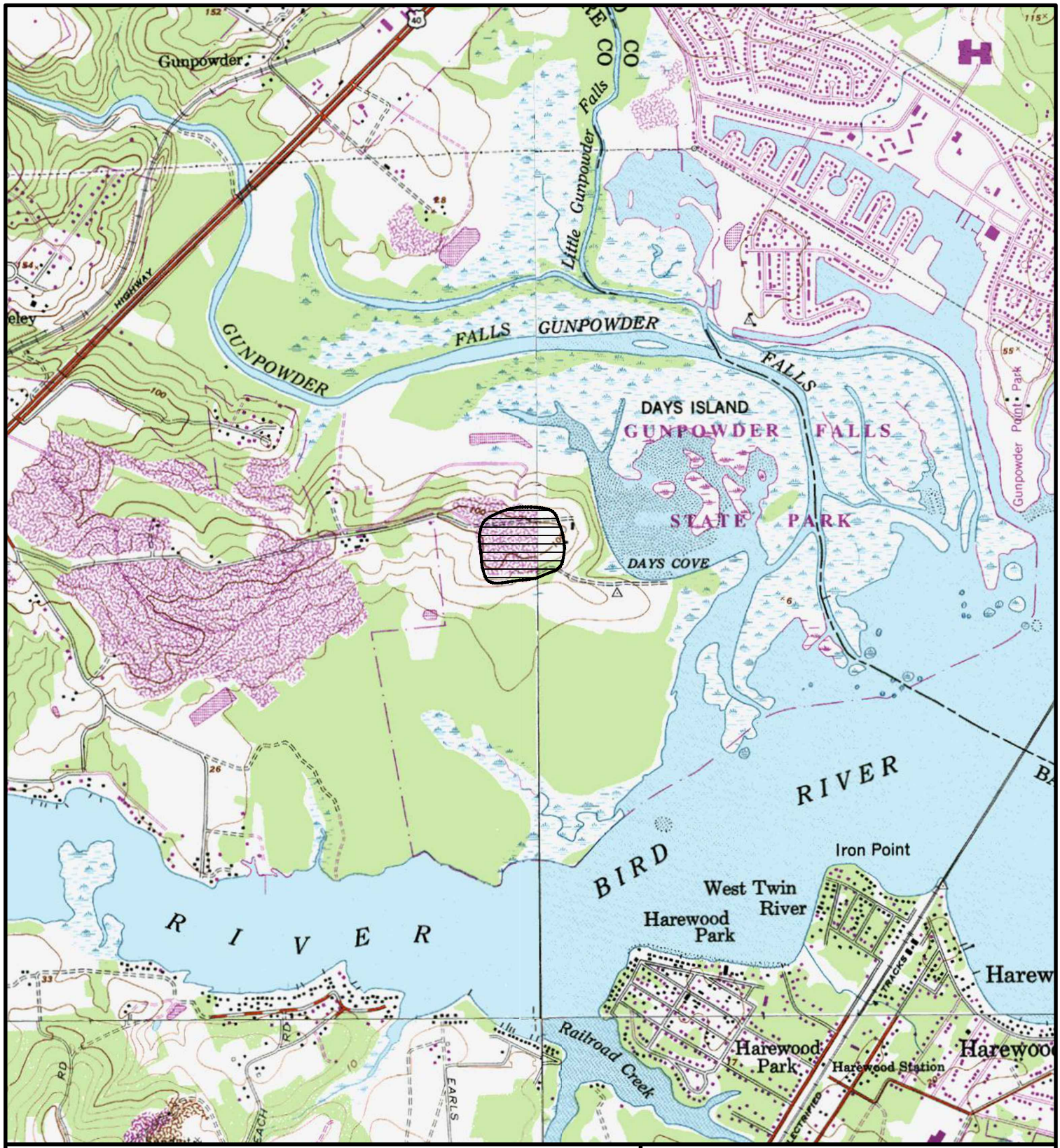
Darren Hunt
Applicant's Name (Print)

Director of Operations
Title

This Notice is provided pursuant to §10-624 of the State Government Article of the Maryland Code. The personal information requested on this form is intended to be used in processing your application. Failure to provide the information requested may result in your application not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment ("MDE") is a public agency and subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by Federal or State law.

Privacy Act Notice: This Notice is provided pursuant to the Federal Privacy Act of 1974, 5 U.S.C. §552.a. Disclosure of your Social Security Number or Federal Employer Identification Number on this application is mandatory pursuant to the provisions of §1-203 (2003), Environment Article, Annotated Code of Maryland, which requires the MDE to verify that an applicant for a permit has paid all undisputed taxes and unemployment insurance. Social Security or Federal Employer Identification Numbers will not be used for any purposes other than those described in this Notice.

Figures



Base map from White Marsh (dated 1986) and Edgewood (dated 1985) USGS 7½ minute quadrangle.

LEGEND

- Original Rubble Landfill

0 2000 4000 6000

SCALE IN FEET

N

Site Location Map

Days Cove Rubble Landfill
Groundwater Discharge Permit
Baltimore County, Maryland

December 2024	Scale: 1" = 2,000'	M08101-2-1

ARM Group LLC
Engineers and Scientists
www.armgroup.net

Figure 1

P:\Days Cove\M08101 Days Cove White Marsh Rubble LF_Drwg\M08101_GWDP_Figure 1_CPS_2024.dwg Plotted: December 16, 2024

Recent Groundwater Quality
Report Summary & Analytical Results

A R M G r o u p I n c .

Days Cove Rubble Landfill
Baltimore County, Maryland

GROUNDWATER MONITORING REPORT
1st SEMI-ANNUAL 2024

ARM Project M08101-2-1

Prepared for:

Days Cove Reclamation Company
6425 Days Cove Road
White Marsh, MD 21162

Prepared by:

ARM Group LLC
9175 Guilford Road
Suite 310
Columbia, Maryland 21046

June 2024

1st Semi-Annual 2024
GROUNDWATER MONITORING REPORT
DAYS COVE RUBBLE LANDFILL

Prepared for:

The Days Cove Reclamation Company
6425 Days Cove Road
White Marsh, Maryland 21162

The Maryland Department of the Environment
Solid Waste Operations Division
1800 Washington Boulevard
Baltimore, Maryland 21230

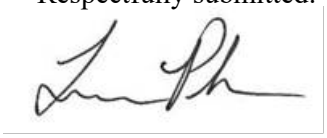
Prepared by:

ARM Group LLC
9175 Guilford Road, Suite 310
Columbia, Maryland 21046

ARM Project No. M08101-2-1

June 2024

Respectfully submitted:



Lauren Parker, G.I.T.
Project Geologist I

Stewart Kabis, P.G.
Q.A. Reviewer

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TABLES

APPENDICES

1 EXECUTIVE SUMMARY

This Groundwater Monitoring Report, prepared by ARM Group LLC, documents the findings of the 1st semi-annual 2024 groundwater monitoring event conducted during March 2024 at the Days Cove Rubble Landfill (DCRLF). The DCRLF is located in White Marsh, Baltimore County, Maryland and is operated by the Days Cove Reclamation Company. The contents of this 1st Semi-Annual 2024 Groundwater Monitoring Report provide the analytical results of the groundwater sampling, document field activities, and present the results of the evaluation of groundwater analytical and potentiometric data collected for the 1st semi-annual 2024 groundwater monitoring event.

On March 20th, 21st, and 22nd, 2024, groundwater samples were collected from 10 monitoring wells located around the perimeter of the Days Cove Rubble Landfill. Sample collection and laboratory analysis of the samples were performed by ALS Environmental. Well SMW-1R was not sampled during the 1st semi-annual 2024 groundwater monitoring event due to low water volume inside of the well at the time of sampling.

The findings of the 1st semi-annual 2024 monitoring event indicate that groundwater quality at the Days Cove Rubble Landfill is not significantly changing. As is typical, a number of parameters measured in the downgradient monitoring wells are elevated with respect to upgradient groundwater quality; however, concentrations of these parameters have generally been stable over the past several years.

2 INTRODUCTION

2.1 Purpose

This 1st semi-annual 2024 Groundwater Monitoring Report for the DCRLF has been prepared by ARM Group LLC (ARM). This report summarizes the findings of the 1st semi-annual 2024 groundwater monitoring event at the DCRLF (the Site). The DCRLF is located in White Marsh, Baltimore County, Maryland, as shown in **Figure 1**, and operated by Days Cove Reclamation Company (DCRCo). Landfilling activities have been underway at the approximately 70-acre Site since the early to mid-1980s. The primary objectives of the monitoring program are to evaluate whether landfill leachate is affecting groundwater quality, and to evaluate whether the conditions of the Refuse Disposal Permit (referenced above) continue to be satisfied.

The following activities were performed for the 1st semi-annual 2024 groundwater monitoring event at the DCRLF and have been documented in this report:

- the measurement of groundwater levels in each of the site monitoring wells;
- the construction of a groundwater contour map based on potentiometric elevations;
- the sampling of the site monitoring wells;
- the laboratory analysis of collected samples for monitoring parameters provided in Table I and Table II of Permit No. 2014-WRF-0592, i.e., volatile organic compounds (VOCs), total metals, and general chemistry parameters;
- the evaluation of analytical data, including comparisons to historical concentrations;
- the statistical evaluation of groundwater monitoring data; and
- documentation of the handling and storage of precipitation and leachate

2.2 Site Description

The DCRLF is owned and operated by DCRCo on land leased from the Maryland Department of Natural Resources (MDDNR). The landfill is located east of Maryland Route 40, along the southern side of Days Cove Road and surrounded by Gunpowder Falls State Park. The active Baltimore County Eastern Sanitary Landfill is located to the immediate west of the DCRLF.

The DCRLF consists of closed rubble landfill cells, active rubble landfill cells, and an additional area for planned future rubble landfill cells. The facility accepts the following wastes for disposal: land clearing debris; wastes associated with the razing of buildings, roads, bridges, and other structures; and construction debris associated with structural building materials. The facility does not accept hazardous waste.

3 SUMMARY OF MONITORING EVENT

3.1 Groundwater Monitoring Network

The existing groundwater monitoring network consists of 11 monitoring wells that were installed around the DCRLF's perimeter. The wells have been denoted as Days Cove Monitoring Wells (DCMW) DCMW-4 through DCMW-10, and Smuck Monitoring Wells (SMW) SMW-1R, SMW-2, SMW-6, and SMW-7. Smuck Monitoring Wells are located towards the western portion of the Site in the (inactive) Closed Out Horizontal Expansion area. The Days Cove Monitoring Wells are generally located to the eastern portion of the Site within the (active) Lateral Expansion and the (inactive) Closed Out Original Cell with Vertical Expansion areas. A topographic map of the DCRLF detailing groundwater monitoring well and surface water monitoring point locations is provided as **Figure 2**. Groundwater contours constructed using depth to groundwater measurements taken during the 1st semi-annual 2024 monitoring event are shown on **Figure 2**. Groundwater appears to generally flow from the west/southwest, across the DCRLF, towards the east/northeast. Groundwater elevation gauging events are performed monthly at the Site and are presented in **Table 1**.

Monitoring wells are categorized as upgradient, downgradient, or cross-gradient based on their geographic position in relation to the landfilled areas (both the closed out inactive sections of the landfill and the active Lateral Expansion) and groundwater flow direction at the DCRLF. Monitoring well SMW-2 is located upgradient of the landfill and monitors groundwater quality conditions migrating onto the DCRLF. The remaining monitoring wells monitor cross-gradient or downgradient conditions.

Monitoring well SMW-7 was installed on September 20, 2013 and has been added to the existing groundwater monitoring network. This well was installed to delineate the extent of elevated mercury concentrations downgradient of monitoring well SMW-1R, per recommendations provided by the Maryland Department of the Environment (MDE) in a correspondence dated March 25, 2013. Monitoring wells DCMW-1 and SMW-5 were located within the footprint of the Lateral Expansion currently being constructed at the DCRLF. These wells were abandoned during August 2013 in accordance with COMAR 26.04.04.11 and, therefore, have been removed from the existing groundwater monitoring network.

In response to elevated levels of several inorganic parameters, SMW-6 was redeveloped on September 4th, 2020 with the goal of removing excess sediment from the well that may have been the cause of increasing metals concentrations. During the site visit to redevelop the well, it was observed that the top of the well was nearly flush with the ground surface at the downhill end of a gravel parking lot and missing a proper well cap. As such, the area around the well was subsequently regraded and a proper well cap installed to ensure no surface runoff was entering the

well. The groundwater samples collected during subsequent monitoring events have reflected significant decreases in turbidity and metals concentrations.

3.2 Groundwater and Surface Water Sampling

On March 20th, 21st, and 22nd, 2024, samples were collected from 10 monitoring wells by ALS Environmental (ALS) of Middletown, Pennsylvania, a DCRCo contractor. Well SMW-1R was not sampled during the 1st semi-annual 2024 monitoring event due to low water volume in the well at time of sampling. Two surface water monitoring points for the DCRLF are located at the outlets of South Sediment Basin No. 1 and South Sediment Basin No. 2. A surface water sample was collected at South Sediment Basin No. 2 (SW-02) during the 1st semi-annual groundwater sampling event. However, there was no flow at South Sediment Basin No. 1 when the field technician visited the site for sample collection, so no surface water sample was collected at that location for the 1st semi-annual 2024 monitoring event. Sampling logs are provided as **Appendix A**. Wells DCMW-6 and SMW-1R are typically purged using a bailer instead of a pump.

3.3 Laboratory Analysis

After sample collection, all groundwater samples were delivered daily to ALS for analysis. Samples were analyzed in accordance with approved EPA methods by ALS for the parameters listed in Tables I and Table II of Permit No. 2014-WRF-0592. The laboratory analytical reports for the 1st semi-annual 2024 monitoring event are included as **Appendix B**.

Field and Laboratory QA/QC utilized during the 1st semi-annual 2024 monitoring event included collection and analysis of a:

- Trip Blank – A trip blank consists of reagent water that is transported to the sampling site and returned to the laboratory of origin without being opened. This serves as a check on sample contamination originating from sample transport, shipping, and laboratory sources. The holding time for the trip blank begins when received by the laboratory, unless otherwise specified by the client, such as time field samples were collected.

- Field Blank – A field blank consists of reagent water that is transported to the sampling site, transferred from one vessel to another at the site, and preserved with the appropriate reagents. This serves as a check on sample contamination arising from ambient conditions during sampling and laboratory sources**.**

- Field Duplicate – Duplicate field samples are collected at a rate of one per sample event. Duplicates are two separate samples collected at a given location side by side or one immediately after the other. Co-located samples provide intra-laboratory precision information for the entire measurement system; including sample collection, homogeneity, handling, shipping, storage, preparation, and analysis.

The field blank and the field duplicate sample were analyzed for MDE Table I and II parameters. Laboratory QA/QC blank detections have been included as **Table 2**. A summary of the duplicate comparison is presented in **Table 3**.

4 COMPARISON TO GROUNDWATER STANDARDS

Upon receipt of the analytical data, parameters detected in each well were evaluated and compared to the established USEPA National Primary MCLs and Secondary Maximum Contaminant Level (SMCLs) Drinking Water Standards. MCLs have been established based upon health concerns, whereas, SMCLS are based upon aesthetic concerns, such as, taste, color, and odor. The first time a parameter is detected at a concentration exceeding its respective MCL in a particular monitoring well, the monitoring well is resampled per Groundwater Monitoring Plan specifications, to confirm or disprove the initial MCL exceedance. If a resample event is performed, both the original and confirmation sample concentrations are presented in the chemical results tables, however, only the confirmation value is used in the data analysis.

Appendix C summarizes parameters in exceedance of their respective MCLs/SMCLs. There were no MCL exceedances observed for the 1st semi-annual 2024 monitoring event.

5 STATISTICAL ANALYSIS

In accordance with the MDE-approved Groundwater and Surface Water Monitoring Plan, the historical set of analytical data from February 1996 through the 1st semi-annual 2024 monitoring event was used to perform a statistical evaluation of groundwater conditions at the DCRLF. All statistical procedures were performed using ChemStat® statistical analysis software (version 6.3.0.2, Starpoint Software, Inc., ©1996-2013). The detailed results of the statistical analyses are included as **Appendix D.**

5.1 Objective

Groundwater monitoring data from each monitoring well were analyzed to determine if any of the parameter levels are exceeding background water quality conditions. This was performed by statistically analyzing the existing groundwater monitoring data. The statistical analyses aid in identifying changes in groundwater quality attributable to the conditions of the landfill.

5.2 Assessing Data Distribution—Normality

Two tests recommended in the 2009 USEPA Unified Guidance Document for the assessment of environmental data distribution are applicable to the data collected at site; the Shapiro-Wilk and the Shapiro-Francia methods. The Shapiro-Wilk method tests for normality of the background data set with 50 or fewer measurements per parameter. The Shapiro-Francia method tests normality of the background data set that has 50 or more measurements per parameter.

If the data for a parameter do not follow a normal distribution, the data are transformed by substituting in the logarithms with base 10 of the original data. Once the data have been transformed, the Shapiro-Wilk test is performed again to determine if the background data follow a log-normal distribution. If the transformed data are normally distributed, the background data distribution is lognormal and parametric statistical methods are appropriate to use to assess the data if the percentage of non-detects is 50% or less. For background data where the distribution is neither normal nor lognormal, or for data sets where the percentage of non-detects is greater than 50%, non-parametric statistical methods are used to assess the data.

5.3 Tolerance Limits

5.3.1 Non-Parametric Analysis

The non-parametric tolerance limit is recommended in the USEPA 2009 guidance document for samples sets where the assumptions of normality or transformed-normality cannot be justified or when a significant portion (> 50%) of the samples are non-detects. The non-parametric tolerance limit (TL) compares each individual down-gradient well parameter concentration to the maximum

concentration in historical background samples from SWM-2. As stated in the USEPA 2009 guidance document, at least 19 background samples are required for 95% coverage.

5.3.2 Parametric Analysis

For normal or log-normal distributed background data, a statistically significant increase (SSI) in compliance data shall be evaluated by using parametric tolerance limit analysis. The parametric tolerance limit analysis establishes an upper concentration limit that is constructed to contain a specified proportion of the data population with a specified confidence coefficient. The TL is calculated from background data (SMW-2) and each compliance well sample is compared to the tolerance limit.

Historical values from November 1998 up through the current monitoring event were used to develop the TLs. A TL is calculated for each parameter detected in the most recent sampling event. **Table 4** summarizes statistical analysis performed on parameters detected in this 1st semi-annual 2024 monitoring event. If the compliance well sample result exceeds the TL, the sample shows evidence of a statistically significant increase above background levels. A tolerance interval, rather than a TL, is used to assess statistically significant changes from background for pH concentrations. The tolerance interval is simply a two-sided TL; instead of an upper limit, it uses a range of concentrations for comparison. A tolerance interval is preferred for pH since a decrease or an increase in concentration can represent diminishing groundwater quality. Statistical worksheets for normality test and tolerance limit calculations are included with this groundwater monitoring report as **Appendix D**.

If exceedances of TLs (or tolerance intervals for pH) are noted in downgradient monitoring wells, each exceedance is further evaluated and compared to the established MCLs and Secondary (SMCL) Drinking Water Standards. For most parameters at the DCRLF, the calculated background TL is higher than the corresponding MCL or SMCL. Generally, background conditions have elevated levels of inorganic parameters, elevating the calculated TLs. In cases where an MCL or SMCL is exceeded without the TL being exceeded, the incident indicates an elevated level but not a statistically significant increase above the background concentration. TL, MCL, and SMCL exceedances are summarized in **Appendix C**.

6 SUMMARY OF RESULTS

The laboratory's Certificates of Analysis providing the results of this 1st semi-annual 2024 monitoring event are included with this report as **Appendix B**. **Table 5** summarizes the Table II Parameters detected in the Days Cove Monitoring Wells, Smuck Monitoring Wells, and Surface Water Locations. **Table 6** summarizes the Table I parameters detected in Days Cove Monitoring Wells, Smuck Monitoring Wells, and Surface Water Locations. TL, MCL, and SMCL exceedances are summarized in **Appendix C**.

6.1 MDE Table II Parameters – Days Cove Wells

Most DCMWs sampled during this event, except for DCMW-6, had at least one parameter in exceedance of its respective SMCL. In DCMW-4, iron and total dissolved solids (TDS) exceeded both the TL and SMCL criteria. In DCMW-5, iron exceeded both the SMCL and TL criteria. Manganese exceeded its SMCL in DCMW-4, DCMW-5, DCMW-7, and DCMW-9. In DCMW-4 and DCMW-6, pH was within the SMCL range but above the TL range. In DCMW-5 and DCMW-7, pH was below the SMCL range but within the TL range. In DCMW-9 and DCMW-10, pH was below the SMCL range and above the TL range. In DCMW-8, pH was equal to the lower end of the SMCL range and above the TL range. Turbidity exceeded its SMCL in DCMW-4, DCMW-5, and DCMW-10.

All DCMWs sampled during this event had at least one parameter in exceedance of its respective TL. Alkalinity exceeded the TL in all DCMWs except DCMW-7. Additional TL exceedances were observed for:

- DCMW-4: ammonia, chemical oxygen demand, chloride, hardness, specific conductance, barium, calcium, magnesium, and potassium;
- DCMW-5: ammonia, barium, and potassium;
- DCMW-6: calcium;
- DCMW-7: copper;
- DCMW-9: chloride, barium, and potassium.

The record of all historical groundwater chemical data for inorganic parameters in DCMWs is included with this GWMR in **Appendix E**.

6.2 MDE Table II Parameters – Smuck Wells and Surface Water Locations

There were no MCL exceedances in Smuck wells during the Spring 2024 sampling event. Manganese exceeded its SMCL but was below the TL in SMW-2, SMW-6, and SW-02. Iron exceeded its SMCL but was below the TL in SMW-6. In SMW-2 and SMW-6, pH was below the SMCL range but within the TL range. In SMW-7, pH was below the SMCL and above the TL

range. In SW-02, pH was above the TL range but within the SMCL range. In SMW-2, SMW-6, and SMW-7, turbidity exceeded its SMCL but was below the TL.

All sampled downgradient and cross-gradient Smuck monitoring wells, as well as SW-02, had at least one Table II parameter in exceedance of its respective TL. Additional TL exceedances were observed for:

- SMW-6: chloride, barium, chromium, lead, mercury, and potassium;
- SMW-7: alkalinity and potassium;
- SW-02: alkalinity, calcium, and potassium.

The record of all historical groundwater chemical data for inorganic parameters in SMWs and Surface Water Locations is included in **Appendix E**.

6.3 MDE Table I Parameters – Days Cove Wells

Detections of Table I Parameters (VOCs) observed in Days Cove monitoring wells are summarized in **Table 6**. As no VOCs have ever been detected in background well SMW-2, the TLs for these compounds detected in downgradient DCMWs are equal to half of the laboratory's reporting limit; therefore, all VOC detections during the 1st semi-annual 2024 monitoring event exceeded their applicable TLs. However, these detections were below any applicable MCLs, and the MTBE detections were below the action level in Maryland (20 micrograms per liter, or µg/L). The record for all historical groundwater chemical data for VOC parameters in Days Cove Monitoring Wells is included in **Appendix F**.

6.4 MDE Table I Parameters – Smuck Wells and Surface Water Locations

Detections of Table I Parameters (VOCs) observed in Smuck monitoring wells and Surface Water Locations are typically summarized in **Table 6**. However, there were no VOC detections in any Smuck monitoring wells or in SW-02 during the 1st semi-annual 2024 groundwater sampling event. The record for all historical groundwater chemical data for VOCs in SMWs and Surface Water Locations is included in **Attachment F**.

6.5 QA/QC Samples

One trip blank and one field blank were prepared for the 1st semi-annual 2024 monitoring event. Detections observed in the QA/QC blanks are presented on **Table 2**.

Field duplicate samples were obtained at a frequency of one field duplicate for every twenty samples collected. During this event the field duplicate was collected from groundwater monitoring location DCMW-10. An analysis was performed to calculate the relative percent difference (RPD) of duplicate samples to obtain an estimate of laboratory method precision. This

analysis was run for all detected constituents in the duplicate samples and is presented in **Table 3**. Most RPD values for the duplicate sample were less than 20%. Overall, the RPD agreement between duplicate samples is very good and the results should be considered useable.

7 GROUNDWATER AND SURFACE WATER SUMMARY AND CONCLUSIONS

During the 1st semi-annual 2024 monitoring event, there were no MCL exceedances.

A number of parameter concentrations in the Days Cove and Smuck monitoring wells exceed their respective SMCLs. Iron, manganese, TDS, and turbidity have been regularly measured above their applicable SMCLs over the course of the historical record in upgradient, cross-gradient, and downgradient wells. The pH in most monitoring wells across the site, including that of background well SMW-2, is regularly measured below the SMCL range. In general, the concentrations of these five parameters measured during the 1st semi-annual monitoring 2024 event are consistent with historical concentrations in their respective wells.

SSIs (determined from tolerance limit exceedances) were observed for alkalinity, ammonia, calcium, MTBE, and potassium in more than one cross-gradient or downgradient monitoring locations during the 1st semi-annual 2024 monitoring event. These parameters do not have established MCLs; therefore, they are not major concerns at this time. A drinking water action level of 20 µg/L has been adopted by MDE for MTBE; however, MTBE was not detected above this action level in any of the on-site monitoring wells. In general, concentrations of these parameters are not significantly changing in Days Cove and Smuck monitoring wells relative to the historical record.

SSIs were observed for barium and chloride in more than one cross-gradient or downgradient monitoring location during the 1st semi-annual 2024 monitoring event. These concentrations were below their applicable MCL/SMCL. The results are consistent with historical concentrations measured for these wells.

Groundwater at the DCRLF is not appreciably changing. Semi-annual sampling and reporting should continue according to the Groundwater and Surface Water Monitoring Plan.

8 OPERATIONS

As part of the landfilling activities at the DCRLF, operational data relating to storage and handling of precipitation and leachate is recorded on-site and summarized below.

8.1 Leachate in Cell A & Cell C Sumps

The leachate level in the collection sumps in Cell A and Cell C of the Lateral Expansion are recorded twice daily in a log-book maintained on-site. The leachate level is measured by means of a pressure transducer that is situated in the leachate pump at the bottom of the sump. The leachate collection sumps are recessed below the landfill liner grade. The average leachate levels above the sump inverts for the period of January 2nd to March 28th, 2024 were 35.5 inches and 33.9 inches in Cells A and C, respectively. The cell floor elevation adjacent to each of these sumps is 30 inches above the sump invert.

8.2 Alarm Light Testing

A red rotating-light is used in conjunction with an alarm if the leachate collection system malfunctions or if the storage units reach their maximum capacity. The alarm light is tested weekly. The system is also equipped with an auto-dialer to notify key personnel if an alarm condition arises. No alarm light activity was observed during this reporting period.

8.3 Leachate Quantity

The leachate collected in the sumps from Cells A and C is pumped to a 500,000 gallon above-ground storage tank (AST). The tank is used for temporary storage purposes prior to transfer to haul trucks for transport to the Back River Wastewater Treatment Plant. The quantity of leachate collected from the sumps is totalized by an inline flowmeter and recorded in the leachate log-book. On August 19th, 2022, a new force main was brought online that uses two inlets to feed into the storage tank, each with an inline flow meter. The totals from these two inlets are added together to create the monthly total. During the period of January 2nd to March 28th, 2024, the monthly leachate totals collected in the storage tank were as follows:

January 2024 – 387,567 gallons
February 2024 – 466,939 gallons
March 2024 – 455,912 gallons

The flows from the AST are measured by an inline flow meter during pumping to the truck. The quantity of leachate disposed of at the Back River during the same timeframe was as follows:

January 2024 – 637,000 gallons
February 2024 – 691,709 gallons

March 2024 – 376,290 gallons

A leachate sample was collected directly from the AST on March 22nd, 2024. The analysis was performed by the same criteria as for the monitoring wells and surface water at the DCRLF. The analytical results from the leachate sample are included with this document in **Appendix B**.

8.4 Precipitation

The daily precipitation is measured on-site with a rain gauge. The cumulative precipitation from January 2nd to March 28th, 2024 was 20.0 inches.

DCMW-5
Historical Groundwater Analytcal Reuslts
Days Cove Rubble Landfill

Parameter	Units	MCL/*SMCL*	9/18/2014	3/25/2015	9/8/2015	3/28/2016	4/26/2016	9/27/2016	3/30/2017	10/10/2017	4/10/2018	9/26/2018	3/28/2019	9/26/2019	3/26/2020	9/29/2020	4/2/2021	9/28/2021	3/28/2022	9/22/2022	3/21/2023	6/9/2023	9/20/2023	3/20/2024	9/18/2024
General Chemistry																									
Alkalinity	mg/L		20	23	32	55		54	53	74	79	75	144	84	74	95	79	71	74	89	87		112	71	79
Ammonia	mg/L		0.348	0.425	0.439	0.788		0.945	0.997	1.5	1.03	0.836	1.29	1.98	0.937	1.12	1.22	0.979	1.12	1.11	1.02		1.1	0.838	2.08
Chemical Oxygen Demand	mg/L		15	*ND*	*ND*	8		22	11	8	*ND*	*ND*	17	18	*ND*	*ND*	22	*ND*	*ND*	*ND*	19		16	*ND*	*ND*
Chloride	mg/L	*250*	8.1	8.1	8.8	12.7		12.1	8.1	11.3	8.5	8.1	7.3	6.4	9	7.4	8.9	8.6	7.5	8	7.7		6.9	8.9	5.6
Hardness	mg/L		73	72	87	96		85	108	108	90.7	96.4	154	149	81.1	143	138	147	159	157	152		157	149	155
Nitrate	mg/L	**10**	0.34	0.76	1.2	*ND*		*ND*	*ND*	*ND*	0.32	1.3	*ND*	*ND*	0.52	*ND*	0.48	0.38	*ND*	*ND*	*ND*		*ND*	1.2	*ND*
Sulfate	mg/L	*250*	56	50.8	55.4	71.4		70.5	59.2	63.1	55.5	52	71.7	88.5	74.7	87.9	95.8	119	109	98.3	109		109	121	123
Total Dissolved Solids	mg/L	*500*	151	149	154	154		189	315	155	152	172	222	272	266	224	296	260	276	258	258		338	256	242
Turbidity	NTU		6.01	8.08	1.25	5.33		7.46	6.81	6.61	2.38	8.23	17.7	6.95	2.35	4.26	2.83	2.26	5.58	9.1	8.9		15	7.4	6
Specific Conductance	µmhos/cm		186	186	201	252		274	244	275	257	270	430	415	354	360	374	417	418	424	436		467	418	439
pH (in field)	pH_Units	*6.5-8.5*	**4.63**	**4.9**	**4.71**	**4.93**	**6.15**	**5.81**	**5.62**	**5.47**	**6.11**	**5.76**	**5.77**	**5.54**	**5.87**	**5.5**	**5.48**	**5.63**	**5.1**	**5.82**	**5.62**		**5.86**	**5.82**	**5.9**
Total Metals																									
Antimony	mg/L	**0.006**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Arsenic	mg/L	**0.010**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Barium	mg/L	**2**	0.079	0.078	0.085	0.093		0.095	0.098	0.097	0.082	0.1	0.13	0.11	0.016	0.11	0.11	0.11	0.12	0.12	0.12		0.12	0.11	0.11
Beryllium	mg/L	**0.004**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Cadmium	mg/L	**0.005**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Calcium	mg/L		15.7	15.6	17.5	21.1		23.7	22.1	26	22.8	24.7	38.5	36	30.4	35	33.2	33.6	34.9	38.4	36.4		37.7	37.4	37.8
Chromium	mg/L	**0.1**	0.0037	0.0075	0.0037	**0.17**	0.0074	0.0052	0.0067	0.0067	0.0068	0.0045	0.0056	0.0043	*ND*	0.0023	0.004	0.0025	0.0027	0.0071	0.012		0.0066	0.0034	0.0055
Cobalt	mg/L		0.0075	0.0079	0.0074	0.0088		0.0068	0.006	0.0065	*ND*	0.0089	0.0093	0.0078	0.0072	0.0096	0.011	0.011	0.014	0.013	0.014		0.012	0.012	0.017
Copper	mg/L	**1.3**	*ND*	*ND*	*ND*	*ND*		*ND*	0.0083	*ND*	*ND*	0.0077	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Iron	mg/L	*0.3*	**0.69**	0.27	**0.32**	**6.9**		**4.2**	**0.9**	**3.8**	**0.62**	**0.7**	**12.6**	**6.4**	**3.3**	**3.7**	**4.3**	**3.3**	**2.9**	**3.8**	**3.6**		**2.7**	**4.7**	**4**
Lead	mg/L	**0.015**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Magnesium	mg/L		7.4	7.5	8	11		11.6	9.7	12.1	10.3	11.3	17.8	15.7	14	15.1	15.1	16.5	17.3	17.3	18.6		18.5	18.7	18.6
Manganese	mg/L	*0.05*	**0.09**	**0.19**	**0.12**	**0.3**		**0.23**	**0.16**	**0.22**	**0.11**	**0.16**	**0.28**	**0.26**	**0.12**	**0.31**	**0.36**	**0.38**	**0.46**	**0.51**	**0.46**		**0.48**	**0.5**	**0.53**
Mercury	mg/L	**0.002**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*NS*	*ND*	*ND*	*ND*	*ND*
Nickel	mg/L		0.0066	0.008	0.0058	0.027		*ND*	0.0072	*ND*	0.0086	0.0093	0.0056	0.0068	*ND*	*ND*	0.0072	*ND*	0.0066	0.0076	0.012		*ND*	0.0059	0.0078
Potassium	mg/L			3.2	2.9	4.3		3.6		3.5	3.3	3.9	5.1	5	4.5	5.5	5.9	6.4	6.3	7.7	7.1		7.7	6.7	8
Selenium	mg/L	**0.05**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Silver	mg/L	*0.1*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Sodium	mg/L		6.1	6.6	7.6	9.7		10.9	12.1	12.5	14.5	12.8	14.3	11.2	10.9	15.5	13.3	14.6	14.2	17	18.7		21.9	18.3	18.7
Thallium	mg/L	**0.002**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Vanadium	mg/L		0.0043	0.0025	*ND*	*ND*		*ND*	0.0032	*ND*	0.0033	0.0063	0.0041	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Zinc	mg/L	*5*	0.03	0.015	0.011	0.012		0.006	0.018	0.03	0.014	0.046	0.014	0.045	0.0065	0.0086	0.013	0.0095	0.0065	*ND*	0.011		0.0058	*ND*	*ND*

MCLs indicated in bold, SMCLs indicated in italics
ND: Parameter not detected above laboratory detection limit
MCL exceedances indicated by bold text and grey highlight
SMCL exceedances indicated by bold text
†: State Action Level

ARM Group Inc.

DCMW-5
Historical Groundwater Analytcal Reuslts
Days Cove Rubble Landfill

Parameter	Units	MCL/*SMCL*	9/18/2014	3/25/2015	9/8/2015	3/28/2016	4/26/2016	9/27/2016	3/30/2017	10/10/2017	4/10/2018	9/26/2018	3/28/2019	9/26/2019	3/26/2020	9/29/2020	4/2/2021	9/28/2021	3/28/2022	9/22/2022	3/21/2023	6/9/2023	9/20/2023	3/20/2024	9/18/2024
Volatile Organic Compunds																									
1,1,1,2-Tetrachloroethane	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
1,1,1-Trichloroethane	µg/L	**200**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
1,1,2,2-Tetrachloroethane	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
1,1,2-Trichloroethane	µg/L	**5**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
1,1-Dichloroethane	µg/L		1.5	1.2	1.2	1.4		1.3	1.1	1.1	ND	1.1	1.2	1.3	*ND*	1.1	1.1	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
1,1-Dichloroethene	µg/L	**7**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
1,2,3-Trichloropropane	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
1,2-Dibromo-3-chloropropane	µg/L	**0.2**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
1,2-Dibromoethane	µg/L	**0.05**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
1,2-Dichlorobenzene	µg/L	**600**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
1,2-Dichloroethane	µg/L	**5**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
1,2-Dichloropropane	µg/L	**5**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
1,4-Dichlorobenzene	µg/L	**75**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
2-Butanone	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
2-Hexanone	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
4-Methyl-2-Pentanone(MIBK)	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Acetone	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Acrylonitrile	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Benzene	µg/L	**5**	**5.1**	3.4	2.1	3.8		3.1	1.1	2.2	*ND*	2	3.8	2.7	2.2	1.7	2.6	1.9	1.3	1.4	1.3		1.1	1.4	1.1
Bromochloromethane	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Bromodichloromethane	µg/L	**80**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Bromoform	µg/L	**80**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Bromomethane	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*1.8*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Carbon Disulfide	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Carbon Tetrachloride	µg/L	**5**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Chlorobenzene	µg/L	**100**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Chlorodibromomethane	µg/L	**80**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Chloroethane	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Chloroform	µg/L	**80**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Chloromethane	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
cis-1,2-Dichloroethene	µg/L	**70**	1.4	1	1.1	*ND*		1	*ND*	*ND*	*ND*	1	1.2	1.2	1.1	1	1.3	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
cis-1,3-Dichloropropene	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Dibromochloromethane			*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Dibromomethane	µg/L	**700**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Ethylbenzene	µg/L	**20†**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Methyl t-Butyl Ether	µg/L	**5**	1.9	1.8	1.6	2.5		2.3	2.1	2.4	1.7	1.9	3	2.6	3	2.3	2.9	2.4	2.4	2.1	2.1		1.7	1.9	1.6
Methylene Chloride	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*1.2*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
mp-Xylene			*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
o-Xylene			*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	1.4	1.1	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Styrene	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Tetrachloroethene	µg/L	**5**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Toluene	µg/L	**1,000**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
trans-1,2-Dichloroethene	µg/L	**100**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
trans-1,3-Dichloropropene	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
trans-1,4-Dichloro-2-butene	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Trichloroethene	µg/L	**5**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Trichlorofluoromethane	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Vinyl Acetate	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Vinyl Chloride	µg/L	**2**	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*
Xylenes	µg/L		*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*		*ND*	*ND*	*ND*

MCLs indicated in bold, SMCLs indicated in italics
ND: Parameter not detected above laboratory detection limit
MCL exceedances indicated by bold text and grey highlight
SMCL exceedances indicated by bold text
†: State Action Level

ARM Group Inc.

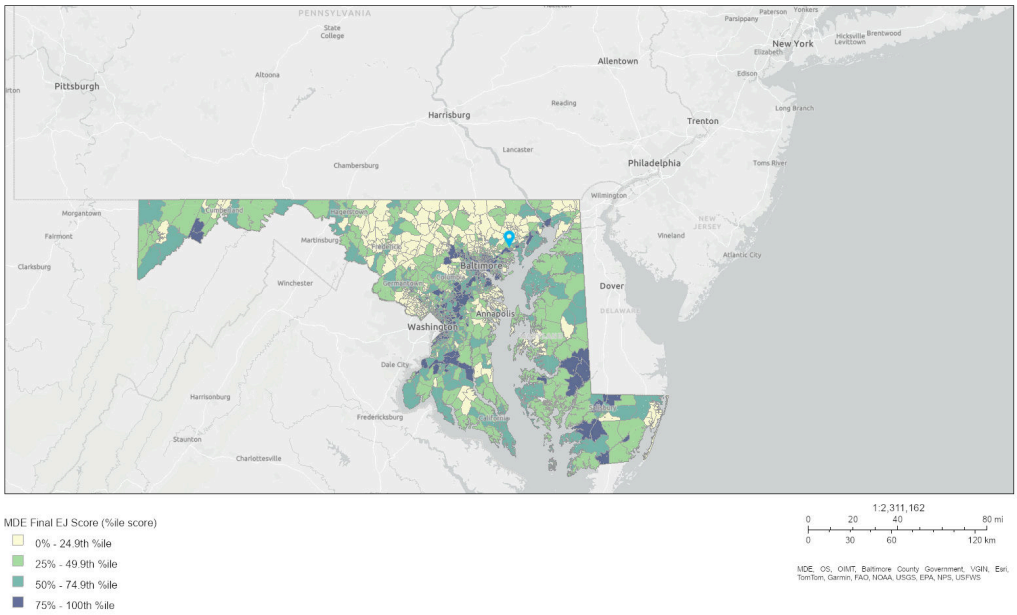
Environmental Justice Score

MDE Screening Report

Area of Interest (AOI) Information

Dec 18 2024 19:12:15 Eastern Standard Time

Tabloid ANSI B Landscape



Summary

Name	Count	Area(mi²)	Length(mi)
MDE Final EJ Score (%ile score)	1	N/A	N/A
Overburdened Communities Combined Score	1	N/A	N/A
Overburdened Pollution Environmental Score (%ile score)	1	N/A	N/A
Overburdened Exposure Score (%ile score)	1	N/A	N/A
Overburdened Sensitive Population (%ile score)	1	N/A	N/A
Socioeconomic/Demographic Score 2020 (Percentile score) (Underserved Community)	1	N/A	N/A
Air Emissions Facilities	0	N/A	N/A
Sulfur Dioxide (2010)	0	N/A	N/A
Ozone (2015)	1	N/A	N/A
Fine Particles (2012)	1	N/A	N/A
Biosolids FY 2020 and Current Permit Details	0	N/A	N/A
Biosolids FY2010 - 2014 Permit Details	0	N/A	N/A
Biosolids FY2009 Expired Permit Details	0	N/A	N/A
Biosolids FY 2020 and Current Permits Distribution By Acreage	0	N/A	N/A
Biosolids FY2015 - 2019 Permits Distribution By Acreage	1	N/A	N/A
Biosolids FY2010 - 2014 Permits Distribution By Acreage	1	N/A	N/A
Biosolids FY2009 Permits Expired Distribution By Acreage	1	N/A	N/A
Biosolids FY 2020 and Current Permit Distribution By Percent Coverage	1	N/A	N/A
Biosolids FY2015 - 2019 Permit Distribution By Percent Coverage	1	N/A	N/A
Biosolids FY2010 - 2014 Permit Distribution By Percent Coverage	1	N/A	N/A
Biosolids FY2009 Expired Permit Distribution By Percent Coverage	1	N/A	N/A
Concentrated Animal Feeding Operations (CAFOs)	0	N/A	N/A
Composting Facilities	0	N/A	N/A
Food Scrap Acceptors	0	N/A	N/A
Landfills	0	N/A	N/A
Correctional Facilities	0	N/A	N/A
Industrial Food Suppliers	0	N/A	N/A
Residential Colleges	0	N/A	N/A
Non-Residential Colleges	0	N/A	N/A
Hospitals	0	N/A	N/A
High Schools	0	N/A	N/A
Grocery Stores	0	N/A	N/A
10 Miles from Landfill	6	N/A	N/A
10 Miles from Composting Facility	2	N/A	N/A
General Composting Facilities Tier 2 (MD)	0	N/A	N/A
Commercial Anaerobic Digester (MD)	0	N/A	N/A
Out of State Facilities	0	N/A	N/A
30 mile buffer (Maryland)	3	N/A	N/A
30 Mile Buffer (Out of State)	0	N/A	N/A
Land Restoration Facilities	0	N/A	N/A
Determinations (points)	0	N/A	N/A
Determinations (areas)	0	N/A	N/A
Entities	0	N/A	N/A
Active Coal Mine Sites	0	N/A	N/A
Historic Mine Facilities	0	N/A	N/A

All Permitted Solid Waste Acceptance Facilities	1	N/A	N/A
Municipal Solid Waste Acceptance Facilities	0	N/A	N/A
Maryland Dam Locations	0	N/A	N/A
Maryland Pond Locations	0	N/A	N/A
Surface Water Intakes	0	N/A	N/A
Wastewater Discharge Facilities	0	N/A	N/A
Drinking Water	0	N/A	N/A
Clean Water	0	N/A	N/A

MDE Final EJ Score (%ile score)

#	Census tract identifier	Geographic Area Name	Total Population	Final EJ Score Percent (for this tract)	Final EJ Score Percentile (Distribution across Maryland)	Area(mi²)
1	24005411302	Census Tract 4113.02, Baltimore County, Maryland	3916	34.52	76.49	N/A

Overburdened Communities Combined Score

#	GEOID20	Geographic_Area_Name	TotalPop	Overburd_Exposure_Percent	Overburd_Exposure_Percentile	Overburd_Poll_Enviro_Percent	Overburd_Poll_Enviro_Percentile	Sensitive_Population_Percent
1	24005411302	Census Tract 4113.02, Baltimore County, Maryland	3,916	57.00	98.70	4.30	27.34	78.58

#	Sensitive_Population_Percentile	OverburdenedAllPercent	OverburdenedAllPercentile	Area(mi²)
1	90.16	89.61	75.60	N/A

Overburdened Pollution Environmental Score (%ile score)

#	GEOID20	Geographic_Area_Name	RentalsOccupiedPre79Percent	Percentile	PercentRMP	PercentRMPEJ	PercentHazWaste	PercentHazWasteEJ
1	24005411302	Census Tract 4113.02, Baltimore County, Maryland	5.15	21.60	1.67	7.22	6.05	21.43

#	PercentSuperFundNPL	PercentSuperFundNPLEJ	PercentHazWW	PercentHazWWEJ	BrownFPercent	Percentile_1	PercentPowerPlants	Percentile_12
1	7.62	24.19	0.00	0.00	0.00	0.00	18.18	99.32

#	PercentCAFOS	Percentile_12_13	PercentActiveMines	Percentile_12_13_14	PollutionEnvironmentalPercent	PollnEnvironmentalPercentile	Area(mi²)
1	0.00	0.00	0.00	0.00	4.30	27.34	N/A

Overburdened Exposure Score (%ile score)

#	GEOID20	Geographic_Area_Name	Total_Pop	PercentNATA_Cancer	Percentile_NATA_Cancer	PercentNATA_Resp_HI	Percentile_NATA_Resp_HI	PercentNATA_Diesel
1	24005411302	Census Tract 4113.02, Baltimore County, Maryland	3,916.00	60.00	27.71	80.00	30.90	29.31

#	Percentile_NATA_Diesel	PercentNATA_PM25	PercentileNATA_PM25	PercentOzone	PercentileOzone	PercentTraffic	PercentileTraffic	PercentTRI
1	22.27	92.58	20.90	97.88	29.99	13.77	29.19	15.79

#	PercentileTRI	PercentHazWasteLF	Percentile_HazWasteLF	PollutionExposurePercent	PollutionExposurePercentile	Area(mi²)
1	94.87	66.67	99.66	57.00	98.70	N/A

Overburdened Sensitive Population (%ile score)

#	GEOID20	Geographic_Area_Name	PerAstma	PercentileAst	PerMyo	PercentileMyo	PerLow	PercentileLow
1	24005411302	Census Tract 4113.02, Baltimore County, Maryland	95.30	83.25	97.80	82.16	29.60	32.19

#	PercentBroad	PercentileBroad	PercentSens	PercentileSens	Area(mi²)
1	8.36	36.77	57.77	58.60	N/A

Socioeconomic/Demographic Score 2020 (Percentile score) (Underserved Community)

#	Census tract identifier	Geographic Area Name	Total Population	Percent Poverty	Percent Minority	Percent Limited English Proficiency	Demographic Score (Percent for this tract)	Demographic Score (Percentile Distribution acoss Maryland)	Area(mi²)
1	24005411302	Census Tract 4113.02, Baltimore County, Maryland	3,916	18.77	37.33	0.93	19.01	42.22	N/A

Ozone (2015)

#	STATEFP10	COUNTYFP10	COUNTYNS10	GEOID10	NAME10	Ozone NAA Area	8-Hr Ozone (2015) Designation	8-HR Ozone (2015) Classification	8-Hr Ozone (2015) Status	Area(mi²)
1	24	005	01695314	24005	Baltimore	Baltimore, MD	Nonattainment	Moderate	*No Data*	N/A

Fine Particles (2012)

#	STATEFP10	COUNTYFP10	COUNTYNS10	GEOID10	NAME10	PM2.5 (2012) Status	Area(mi²)
1	24	005	01695314	24005	Baltimore	Attainment/Unclassifiable	N/A

Biosolids FY2015 - 2019 Permits Distribution By Acreage

#	County Name	FY2015to2019	Area(mi²)
1	Baltimore	*No Data*	N/A

Biosolids FY2010 - 2014 Permits Distribution By Acreage

#	County Name	FY2010to2014	Area(mi²)
1	Baltimore	*No Data*	N/A

Biosolids FY2009 Permits Expired Distribution By Acreage

#	County Name	FY2009	Area(mi²)
1	Baltimore	*No Data*	N/A

Biosolids FY 2020 and Current Permit Distribution By Percent Coverage

#	County Name	FY2020andAfter	Area(mi²)
1	Baltimore	*No Data*	N/A

Biosolids FY2015 - 2019 Permit Distribution By Percent Coverage

#	County Name	FY2015to2019	Area(mi²)
1	Baltimore	*No Data*	N/A

Biosolids FY2010 - 2014 Permit Distribution By Percent Coverage

#	County Name	FY2010to2014	Area(mi²)
1	Baltimore	*No Data*	N/A

Biosolids FY2009 Expired Permit Distribution By Percent Coverage

#	County Name	FY2009	Area(mi²)
1	Baltimore	*No Data*	N/A

10 Miles from Landfill

#	County	Type	Facility_N	ADDRESS	FILL	SITE__ACRE	AI_No_	Owner_Type
1	BALTIMORE	WRF	Days Cove RubbleLandfill	6425 Days Cove Road, White Marsh MD 21162.	35.6	99.00	22,038.00	PRI
2	BALTIMORE	WMF	Eastern MunicipalLandfill	6259 Days Cove Road, White Marsh MD 21162.	200	367.00	10,414.00	CTY
3	BALTIMORE	WTS	Eastern TransferStation	6260 Days Cove Road, White Marsh MD 21162.	-	3.20	10,414.00	CTY
4	BALTIMORE	WRF	Honeygo Run Rubble LandfillSE	10710 Philadelphia Road, Perry Hall MD 21128.	77	117.00	20,643.00	PRI
5	HARFORD	WPT	AustonPF&TS	1202 Pauls Lane, Joppa MD 21085.	3	6.01	36,499.00	PRI
6	HARFORD	WTE	HarfordWaste-To-Energy	1 Magnolia Road, Joppa MD 21085.	-	4.00	7,751.00	PRI

#	MD_GRID__E	PERMITNUMB	EXPIRATION	Area(mi²)
1	975 /570	2014-WRF-0592	10/12/2019, 8:00 PM	N/A
2	974 /570	2015-WMF-0052A	7/13/2020, 8:00 PM	N/A
3	974 /570	2013-WTS-0665	4/8/2020, 8:00 PM	N/A
4	958 /564	2014-WRF-0579A	10/12/2019, 8:00 PM	N/A
5	983 /583	2012-WPT-0616	1/13/2018, 7:00 PM	N/A
6	994 /573	2013-WTE-0576	12/11/2018, 7:00 PM	N/A

10 Miles from Composting Facility

#	County	Facility	Address	Accepts_Fo	Location_o	Area(mi²)
1	*No Data*	Eastern Sanitary Lanfill Solid Waste Management Facility	6259 Days Cove Rd, White Marsh, MD 21162	No	6259 Days Cove Rd, White Marsh Station, MD 21162	N/A
2	*No Data*	Harford Sands	40 Fort Hoyle Rd, Joppa, MD 21085	No	40 Fort Hoyle Rd, Joppa, MD 21085	N/A

30 mile buffer (Maryland)

#	Facility_Name_1	Facility_Contact_1	Contact_Phone	Contact_Email_1	Contact_2	Contact_2_Phone	Contact_2_Email	URL	Area(mi²)
1	Bioenergy DEVCO - Maryland Organics Recycling Facility	Vinnie Bevivino	(202) 360-1805	Vbevivino@bioenergydevco.com	Mike Manna	(609) 744-2819	mmanna@bioenergydevco.com	https://www.bioenergydevco.com/maryland-organics-recycling-facility/	N/A
2	Veteran Compost - Aberdeen	Justen Garrity	(443) 584-3478	info@veterancompost.com	*No Data*	*No Data*	*No Data*	https://www.veterancompost.com/	N/A
3	Composting Facility at Alpha Ridge Landfill	Bureau of Environmental Services	(410) 313-6444	*No Data*	*No Data*	*No Data*	*No Data*	https://www.howardcountymd.gov/public-works/composting-facility	N/A

All Permitted Solid Waste Acceptance Facilities

#	county	AI_ID	master_ai_name	Facility_Type	OwnerType	permit_number	ai_physical_address	permit_class	Count
1	Baltimore	22,038	Days Cove Rubble Landfill	Rubble / Construction & Demolition Landfill	Private (Commercial)	2016-WRF-0592A	6425 Days Cove Road, White Marsh, MD 21162	New	1