



Prepared for:
MARYLAND ENVIRONMENTAL SERVICE
259 Najoles Road
Millersville, Maryland 21108

PHASE I REPORT

PROPOSED MIDSHORE III REGIONAL SOLID WASTE FACILITY CENTREVILLE, QUEEN ANNE'S COUNTY, MARYLAND

Prepared by:

Professional Certification: I hereby certify that this document was approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland.

License No.

Expiration Date:

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Geosyntec Project Number: ME2008

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ATTACHMENTS

- Attachment 1: Refuse Disposal Permit Application Form
- Attachment 2: Property Owners in Proximity of 1,000-ft Radius of Site or Abutting Entrance Road
- Attachment 3: FAA Determination of No Hazard to Air Navigation

1 INTRODUCTION

1.1 Terms of Reference

The Code of Maryland Regulation (COMAR) of Water Supply, Sewage Disposal, and Solid Waste, COMAR 26.04.07, requires a person intending to construct or operate a sanitary landfill to obtain a permit from the Approving Authority, Maryland Department of the Environment (MDE). A Phase I Report is required to be submitted along with a Refuse Disposal Permit Application Form. In accordance with this requirement, this Phase I Report was prepared to notify MDE of the intention to apply for development of the proposed Midshore III Regional Solid Waste Facility (MSIII), and to provide general information about the site. The proposed site for MSIII (Site) is accessed from the end of Harper Road near Centreville, Queen Anne's County, Maryland as presented in Figure 1.

This Phase I Report was prepared by Geosyntec Consultants (Geosyntec) of Columbia, Maryland, on behalf of Maryland Environmental Service (MES), the future owner/operator of MSIII.

This Phase I Report is organized in a manner that is intended to address the specific requirements of COMAR 26.04.07.06. The remainder of this report is organized as follows:

- Section 2 describes how this report addresses and meets the regulatory requirements for the Phase I report,
- Section 3 presents the current layout of the Site and topographic features,
- Section 4 presents a description of soils at the Site and surrounding area,
- Section 5 presents the Site geology,
- Section 6 presents general information regarding the proposed development of the Site, and
- Section 7 presents relevant references.

1.2 Existing Conditions and Description of Proposed Facility

As shown on the area map provided as Figure 1, the Site is located approximately six miles west of U.S. Route 301, northwest of Centreville and accessed via county roads and Maryland Route 213. The Site is owned by the Commissioners of Queen Anne's County and is currently used for storage and to house a temporary field office for County law enforcement. Existing Site topography and conditions within the property boundary are presented in Figure 2.

The proposed MSIII facility is to be entirely located on the Site, which comprises a single parcel (P.40) and was acquired for the purpose of constructing a municipal solid waste (MSW) landfill. The parcel has an area of approximately 124 acres. Queen Anne's County also owns the parcel directly south of the Site (P.138), where the closed Centreville Landfill is located and where the County operates the Centreville Drop-off Center and the Queen Anne's County Recycling Center. A network of groundwater monitoring wells and gas monitoring probes has been established for the closed landfill as indicated on Figure 2.

The proposed final grading for the MSIII facility is shown in Figure 3. As shown in Figure 3, the western portion of the Site will not be used for solid waste disposal; therefore, only about 90 acres of the 124-acre parcel will be used to construct MSIII. The proposed footprint of MSIII covers an area of approximately 61.5 acres and will reach a maximum elevation of 240 feet above mean sea level (ft-msl). Allowing for the thickness of the final cover system, the maximum elevation of waste contained in the landfill will be about 236 ft-msl. The total anticipated waste disposal capacity will be approximately 8.1 million cubic yards (MCY).

2 PHASE I REPORT REQUIREMENTS

2.1 Overview

COMAR 26.04.07.14 requires the applicant to submit a Phase I Report in accordance with the requirements of COMAR 26.04.07.06. In this Section, a summary of the Phase I Report requirements is provided (in *italic type*), followed by a brief description of how each requirement is met or addressed in this report.

2.2 Phase I Report Requirements (COMAR 26.04.07.06.B)

- (1) *Completed and signed application form referenced in Regulation (26.04.07.05.B).*

The completed Refuse Disposal Permit Application Form is included as Attachment 1.

- (2) *Current U.S.G.S. 7.5-minute quadrangle map with the proposed site outlined.*

An area map reproduced from the United States Geological Survey (USGS) 7.5-minute quadrangle map is shown in Figure 1.

- (3) *Current topographic map, which is an accurate depiction of the site at the time of application, at a scale not smaller than 1 inch equals 200 feet, which depicts the property boundaries, on-site buildings and structures, and pertinent surficial features including but not limited to: (a) Springs, (b) Seeps, (c) Streams, (d) Rock outcrops, (e) Sink holes, (f) Surface impoundments, (g) Water wells, (h) Forested areas, and (i) The location of any buried or overhead power transmission lines, utility pipelines, or storage tanks on the property.*

The current topography of the Site is shown in Figure 2. A narrative description of the topographic features of the Site is presented in Section 3.

- (4) *Map which depicts the surrounding zoning and land use within 1/2 mile of the site boundaries.*

Local area zoning and land use is shown in Figure 4. A narrative description is presented in Section 3.

- (5) *Map showing the distribution of the soils at the site.*

A U.S. Department of Agriculture (USDA) soil distribution map for the Site and surrounding area is shown in Figure 5.

(6) *Narrative description of the soils at the site.*

A narrative description of the soils at the Site is presented in Section 4.

(7) *Map showing the geology at the site based on available data.*

A regional geologic map indicating the location of the Site is shown in Figure 6.

(8) *Narrative description of the geology at the site based on available data.*

A narrative description of Site geology is presented in Section 5.

(9) *Description of the proposed activity including: (a) Type of facility, (b) Area served, (c) Capacity, and (d) Types of waste accepted.*

A brief description of the proposed activity is provided in Section 6.

2.3 Additional Requirements

The following additional attachments are included with this report:

(1) *Property Owners within 1,000-ft Radius of the Site containing the Proposed Expansion*

A tabulated list of property owners within a 1,000-ft radius of the Site boundary is provided in Attachment 2. The list was compiled based on information provided by Queen Anne's County. A map showing the Site boundary and the parcels/lots of land conservatively identified to be within (or just beyond) a 1,000-ft distance of the site area are reproduced in Figure A.1 in Attachment 2. For completeness and to ensure appropriate notification of all property owners and residents that may reasonably be impacted by development of MSIII, properties abutting Harper Road outside this 1,000-ft distance are also shown on Figure A.1 and listed in Attachment 2.

(2) *Notification to Federal Aviation Administration (FAA)*

The FAA's Notice Criteria Tool, available at oaaaa.faa.gov, was used to determine if the MSIII owner/operator is required to submit a notice to the FAA regarding their intention to build the landfill. Based on the proposed height not exceeding 200 feet above ground surface and the proposed location of the landfill, a notice to the FAA is not required. The report generated by the Notice Criteria Tool is provided as Attachment 3.

3 SITE DESCRIPTION

3.1 Current Land Use

Existing topography and current land use at the Site are shown in Figure 2. The Site, which is predominantly flat, is currently in no-till agricultural use. A gravel access road leads to a storage building near the center of the property with a gravel parking area outside the building. Empty roll-off containers and other items are stored on or near the parking area. A temporary field office trailer for County law enforcement exists near the storage building. The trailer is supplied with water via a buried pipeline from an onsite supply well. A fire hydrant is located on the pipeline between the well and the trailer. Sanitary wastewater from the trailer is discharged via an onsite septage system as shown on Figure 2.

The Site is accessed from the end of Harper Road via Maryland Route 213, with the entrance located on the southern side of P.40. Harper Road is also the current access road for the Centreville Drop-off Center and the Queen Anne's County Recycling Center. An overhead power transmission line enters the site alongside the vehicular entrance, running to an onsite utility pole from where it runs below ground to the office trailer. An underground telecommunications line runs parallel to the electrical line. The alignment of the buried electrical and telecommunications lines is shown on Figure 2.

3.2 Site Topography and Zoning

The current topography of the Site is shown in Figure 2 based on an aerial survey conducted by MES in February 2021. The Site is bounded by woods and wetlands to the east, south, west, and northwest of the property. Island Creek runs in a northwesterly direction along the southwestern property boundary. An unnamed tributary to Island Creek crosses the site from northeast to southwest. A large pond exists on this tributary, formed by a small earthen dam. Based on review of the USGS map (Figure 1) and topographic map for the area (Figure 2), as well as various site walks performed by Geosyntec and MES, no springs, seeps, rock outcrops, or sinkholes are present on or around the Site.

Figure 4 shows a zoning map of the surrounding area. As indicated by the red line on Figure 4, the Site is located within an agricultural zoning district. The properties located within a half mile of the site are also designated as agricultural.

4 NARRATIVE DESCRIPTION OF SOILS

The USDA soil distribution map for the Site and surrounding area is shown in Figure 5. According to the map, the proposed development area and the surrounding area are composed of topsoil units classified as the following:

- CaA – Carmichael loam, 0–2% slopes
- DUD – Downer and Unicorn soils, 10–15% slopes
- HvA – Hurlock sandy loam, 0–2% slopes
- IgB – Ingleside sandy loam, 2–5% slopes
- IgC – Ingleside sandy loam, 5–10% slopes
- LO – Longmarsh and Indiantown soils, frequently flooded
- PiA – Pineyneck silt loam, 0–2% slopes
- PiB – Pineyneck silt loam, 2–5% slopes
- UsB – Unicorn-Sassafras loams, 2–5% slopes

The soils are generally comprised of loams, silt loams, and sandy loams. Figure 5 indicates that slopes within the Site boundaries range from zero percent (in the PiA, HvA, and CaA soils) to 15 percent in the DUD soils. Flooding is frequent in the LO soils, which exist on the portions of the Site where streams are present.

Figure 5 also indicates standing water (W), including the large pond located within the Site boundary, which is surrounded by CaA, DUD, IgB, IgC, and LO soils.

5 NARRATIVE DESCRIPTION OF GEOLOGY

A summary of publicly available information from relevant geologic and hydrogeologic investigations in reasonable proximity to the Site is provided in this section, as there are no known on-site soil investigations that have taken place. Due to the lack of site-specific information, the discussions focus only on the regional and county-scale geology and hydrogeology.

5.1 Regional Geology

The Site is located in the Delmarva Peninsula Region of the Atlantic Coastal Plain physiographic province, which is bounded by the Piedmont Plateau Province to the west and the Atlantic Ocean Continental Shelf to the east. The Site is inland from the Chesapeake Bay, and the Coastal Plain surficial sediments in the immediate vicinity of the Site consist predominantly of Eastern Shore Upland Deposits. The surface of Queen Anne's County also consists of Lowland Deposits (mostly on the western margin of the County) and less common occurrences of the Aquia and Calvert Formations. These units are sedimentary in nature and range in thickness from 0 to 150 feet in the Lowland Deposits and Calvert Formation (Figure 6). The Upland Deposits are generally composed of gravel, sand, silt, and clay. These sediments are up to 90 feet thick (locally thicker in Paleochannel deposits) and are characterized by cross-bedded, poorly sorted, medium- to coarse-grained sands and gravels. Silts and clays make up minor constituents of these deposits and boulders are common near the base of this formation (Figure 6).

In 2013, the Maryland Department of Natural Resources published a summary of the hydrogeologic framework of the Maryland Coastal Plain Aquifer System (MDNR, 2013). This report indicated that several geologic formations are regionally significant to Queen Anne's County. These include the Quaternary Alluvium, Parsonburg, Sinepuxent, Ironshire, Omar, Bearverdam and Pensauken Formations, which are predominantly Pleistocene in age except for the Beaverdam and Pensauken Formations, which are Pliocene and Miocene in age, respectively. These formations are significant because they provide the hydrogeologic framework for the water-table aquifer, or Surficial Aquifer, on the Eastern Shore. This aquifer is a primary water source on the Eastern Shore and is further discussed in Section 5.2 (MDNR, 2013; Bachman and Wilson, 1984).

The formations listed above are generally composed of sands, gravels, and combinations thereof deposited in eolian, fluvial, estuarine, lagoonal, and barrier and spit depositional environments (MDNR, 2013). In Queen Anne's County, they compose the Eastern Shore Upland Deposits mentioned above. The exact nature and thickness of the sediments in the vicinity of the site is not fully understood but should be subject to investigation during future preparation of a Phase II Site Geologic Report for the proposed landfill.

5.2 Hydrogeology

There are three hydrogeologic units of significance in Queen Anne's County. The most relevant to proposed landfill operations at the Site is the Surficial Aquifer. This aquifer is underlain by the Calvert Confining Unit in the northern portion of the County and by the Calvert Aquifer System in the southern portion of the County. The Surficial Aquifer represents the unconfined, water-table aquifer on the Delmarva Peninsula. In Queen Anne's County, this aquifer is thought to experience high water-table relief, unconfined conditions, and rapid flow systems. The vertical and horizontal extent of the Surficial Aquifer is highly variable, with vertical extents ranging from fewer than 10 feet to over 230 feet. Near the Site, it is expected the vertical extent of the Surficial Aquifer will fall within the vertical extent of the Eastern Shore Upland Deposits. Known values of transmissivity for the Surficial Aquifer in Queen Anne's County range from 2,100 to 13,000 square feet per day and the aquifer is used for domestic, municipal, industrial, agricultural, and commercial purposes (MDNR, 2013; Bachman and Wilson, 1984).

The Calvert Confining Unit and the confined Calvert Aquifer System are both constituents of the Miocene age Calvert Formation. The Calvert Aquifer System is composed of the upper sandy portion of the Calvert Formation and the lower, fine-grained portion (silts and clays) makes up the Calvert Confining Unit. These units are present over much of the Delmarva Peninsula and tend to dip gently to the south. The vertical transition between the Surficial Aquifer and the Calvert Formation may be difficult to discern depending on horizontal location. Where the base of the Surficial Aquifer is in contact with the Calvert Confining Unit, the transition is likely evident by a contact between the sand of the Surficial Aquifer and the fine-grained clay-rich sediments of the confining unit below. The transition between the Surficial aquifer and the Calvert Aquifer System may be more cryptic as a result of their similar lithologies. It is likely there is a hydraulic connection between the two systems and that the Surficial Aquifer may be a source of recharge for the Calvert Aquifer System (MDNR, 2013).

6 DESCRIPTION OF PROPOSED ACTIVITIES

MSIII will serve as the new Midshore Regional Solid Waste Facility to serve the future solid waste needs of Talbot, Caroline, Kent, and Queen Anne's Counties. These four counties comprise the so-called Midshore Counties, which have entered into agreement to each host a landfill for 20 years. As such, MSIII is intended to provide solid waste disposal for a 20-year period from 2031 through 2050 and will replace the existing Midshore II Regional Solid Waste Facility (MSII) in Caroline County, which in turn replaced the now closed Midshore I Regional Solid Waste Facility (MSI) in Talbot County. Both MSI and MSII were/are operated by MES. The proposed MSIII landfill will accept residential and commercial solid waste (household refuse and waste from businesses, stores, and offices), bulky waste (household appliances and white goods), sewage sludge, land clearing debris and yard waste, asbestos, and construction and demolition (C&D) debris.

The proposed construction of MSIII will provide approximately 8.1 MCY of disposal capacity. The total tonnage of waste disposal reported at MSII was 134,860 tons in 2019, the most recent year for which complete records are available. A waste growth rate of 1.43 percent was calculated based on historical waste filling data at MSI (from 1992 through 2010) and MSII (from 2011 through 2019). Based on this, it is projected that the waste tonnage accepted for disposal at MSIII will be about 155,842 tons in 2031 (i.e., the first year of operation), growing to about 164,969 tons in 2035 (i.e., the fifth year of operation). A breakdown of expected waste composition based on projected tonnages is provided in the Application Form in Attachment 1.

Using a conservative airspace utilization factor of 0.55 tons/CY based on operational data from MSII, projected tonnages at MSIII equate to approximately 283,349 CY in 2031, increasing to 299,944 CY by 2035. Based on these projections, the proposed landfill will have sufficient capacity to meet the expected required service life for MSIII of approximately 20 years between 2031 and 2050, including a contingency of approximately 20 percent to allow for uncertainties in future waste projections.

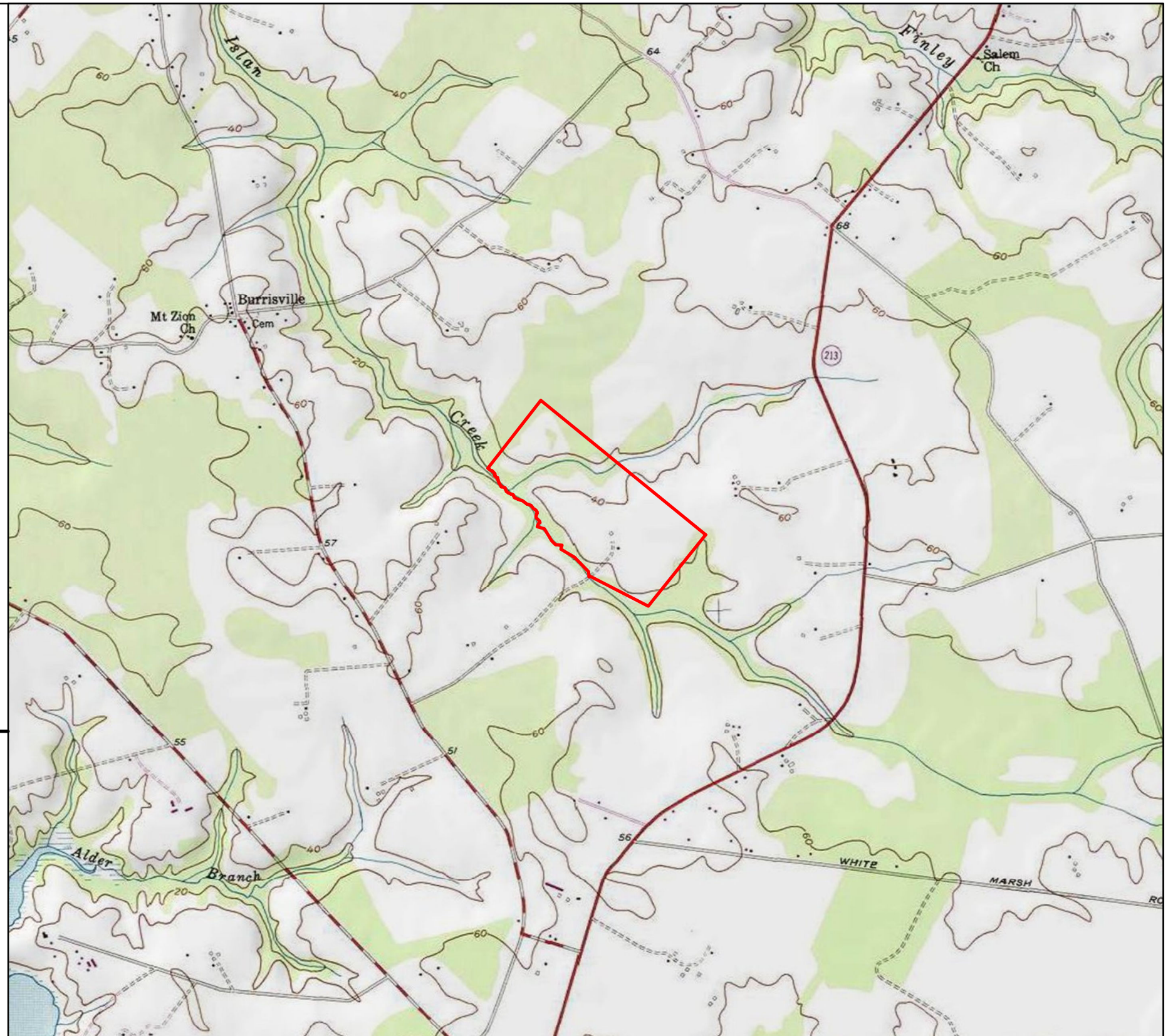
7 REFERENCES


Bachman L. J., Wilson J.M., 1984. The Columbia Aquifer of the Eastern Shore of Maryland: Hydrogeology, Maryland Geological Survey, Report of Investigations No. 40.

Maryland Department of Natural Resources (MDNR), 2013. Maryland Coastal Plain Aquifer Information System: Hydrogeologic Framework, Open-File Report No. 12-02-20, DNR Publication No. 12-2272013-628, 2013.

Maryland Geological Survey (<http://www.mgs.md.gov/indexgeo.html>)

FIGURES



Legend
 Approximate Site Boundary

Notes
 © OpenStreetMap (and) contributors, CC-BY-SA
 Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
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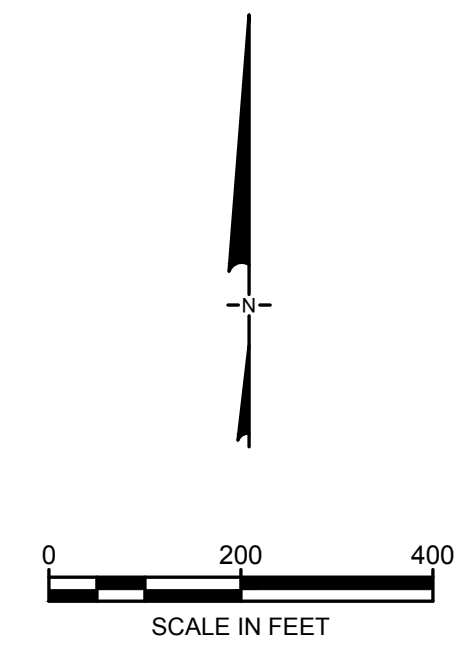
Area Map
 Midshore III Regional Landfill
 Centreville, Queen Anne's County, Maryland

Geosyntec
 consultants

Columbia, Maryland

May 2021

Figure
1



LEGEND

- SURVEY CONTROL POINT (SEE TABLE BELOW NOTES)
- 5' MAJOR EXISTING CONTOUR (FT-MSL)
- 1' MINOR EXISTING CONTOUR (FT-MSL)
- SPOT ELEVATION
- UTILITY POLE
- WELL (NOTE 7)
- FIRE HYDRANT
- SEPTIC SYSTEM MANHOLE (NOTE 7)
- SEPTIC TANK (NOTE 7)
- OVERHEAD WIRE
- UNDERGROUND WATER LINE (NOTE 7)
- UNDERGROUND ELECTRICAL LINE (NOTE 7)
- UNDERGROUND TELECOMMUNICATIONS LINE (NOTE 7)
- SEPTAGE LINE (NOTE 7)
- SURFACE WATER / STREAM (NOTE 1)
- TREE LINE
- EXISTING FENCE
- PROPERTY LINE (NOTE 5)
- RIPRAP
- ACCESS ROAD
- GROUNDWATER MONITORING WELL (APPROXIMATE LOCATION) (NOTE 6)
- LANDFILL GAS PROBE (APPROXIMATE LOCATION) (NOTE 6)

NOTES:

1. FIELD ELEVATIONS AND TOPOGRAPHIC FEATURES SHOWN HEREON WERE GENERATED THROUGH AN AERIAL SURVEY USING GROUND CONTROL POINTS BY MES ON FEBRUARY 8 - 24, 2021. GROUND CONTROL POINTS WERE ESTABLISHED THROUGH EXTENDED GPS SESSIONS. DATA SHOWN HEREON IS SUBJECT TO TYPICAL INACCURACIES INHERENT TO AERIAL MAPPING WITH WRITE OUT TECHNOLOGY.
2. VARYING CONDITIONS OF SURFACE WATER WERE PRESENT DURING SURVEYING CAUSED BY ICE MELT AND PRECIPITATION.
3. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83/2011) MARYLAND STATE PLANE - U.S. SURVEY FT.
4. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
5. PROPERTY BOUNDARY AND PARCEL INFORMATION OBTAINED FROM QUEEN ANNE'S COUNTY GIS DATA DOWNLOAD SITE ON 23 MARCH 2021. ([HTTPS://WWW.QAC.ORG/912/GIS-DATA-DOWNLOAD](https://www.qac.org/912/GIS-DATA-DOWNLOAD)).
6. GROUNDWATER MONITORING WELL AND LANDFILL GAS PROBE LOCATIONS FOR THE CLOSED CENTREVILLE LANDFILL ARE APPROXIMATE AND WERE OBTAINED FROM THE ANNUAL GROUNDWATER MONITORING REPORT DATED APRIL 9, 2020, PREPARED BY HILL CONSULTING INC.
7. UNDERGROUND UTILITIES WERE FIELD LOCATED AND MARKED BY GROUND PENETRATING RADAR SYSTEMS, LLC ON 1 FEBRUARY 2023. ALL MARKINGS WERE SURVEYED BY MES ON 3 FEBRUARY 2023, WITH THE ELECTRONIC SURVEY FILE PROVIDED TO GEOSYNTEC.

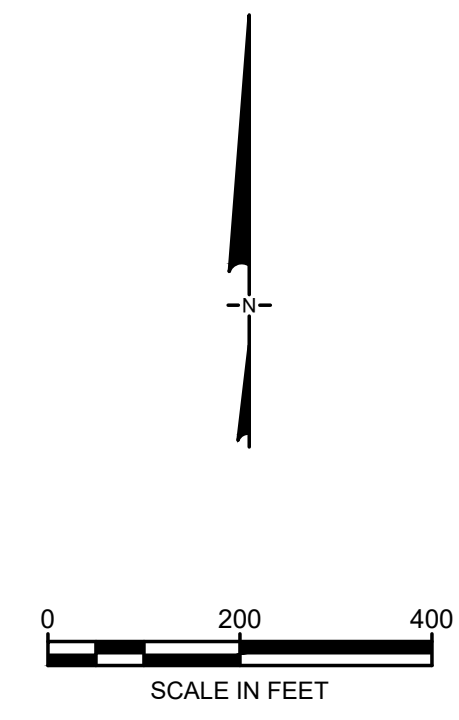
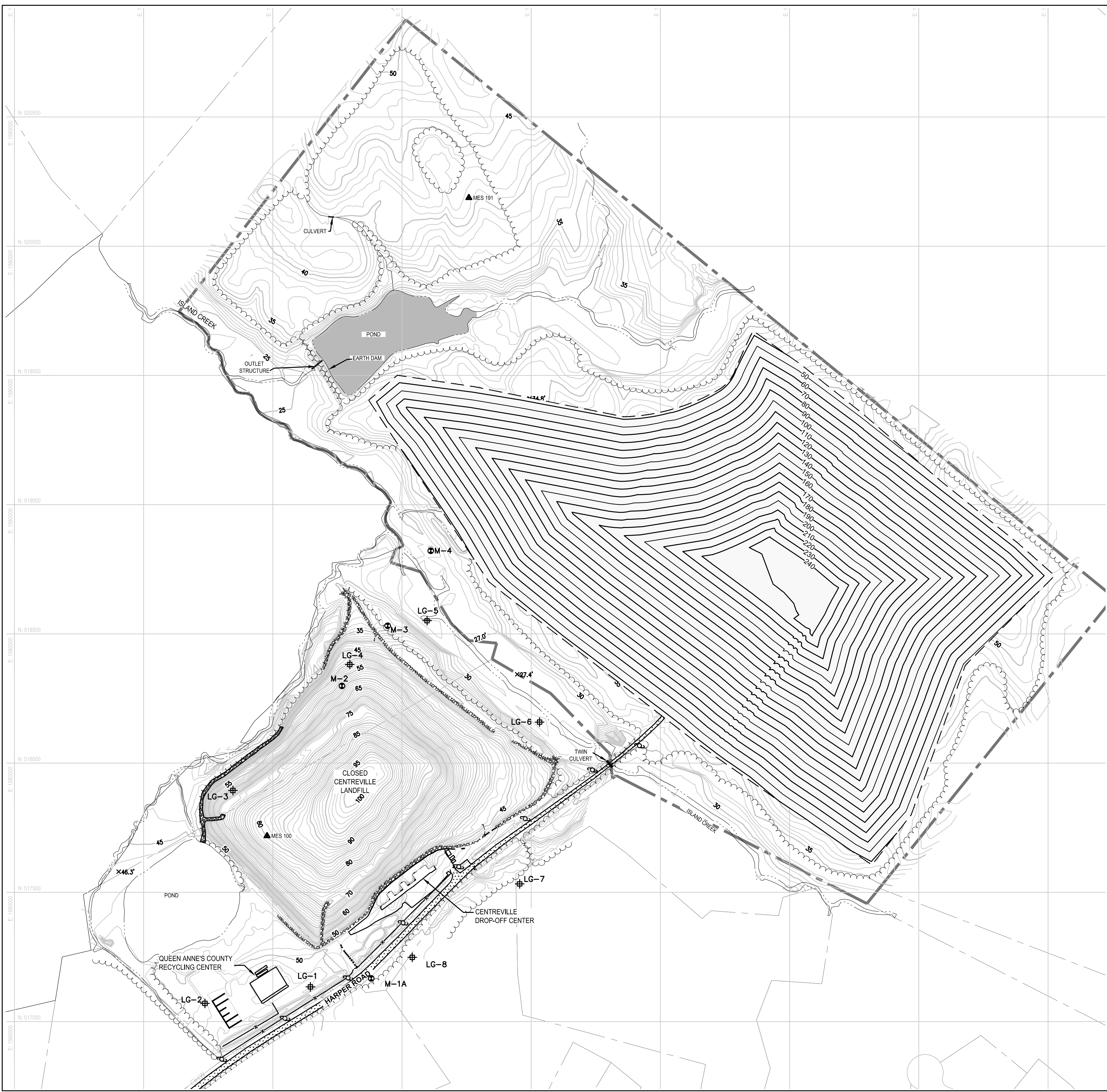
POINT	NORTHING	EASTING	ELEVATION
MES 100	517718.562	1580977.776	80.204
MES 104	518258.690	1582808.489	41.494
MES 191	520187.239	1581758.506	41.560

EXISTING CONDITIONS
Midshore III Regional Landfill
Centreville, Queen Anne's County, Maryland

PROJECT NO: ME2008 FEBRUARY 2023

FIGURE
2

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LEGEND

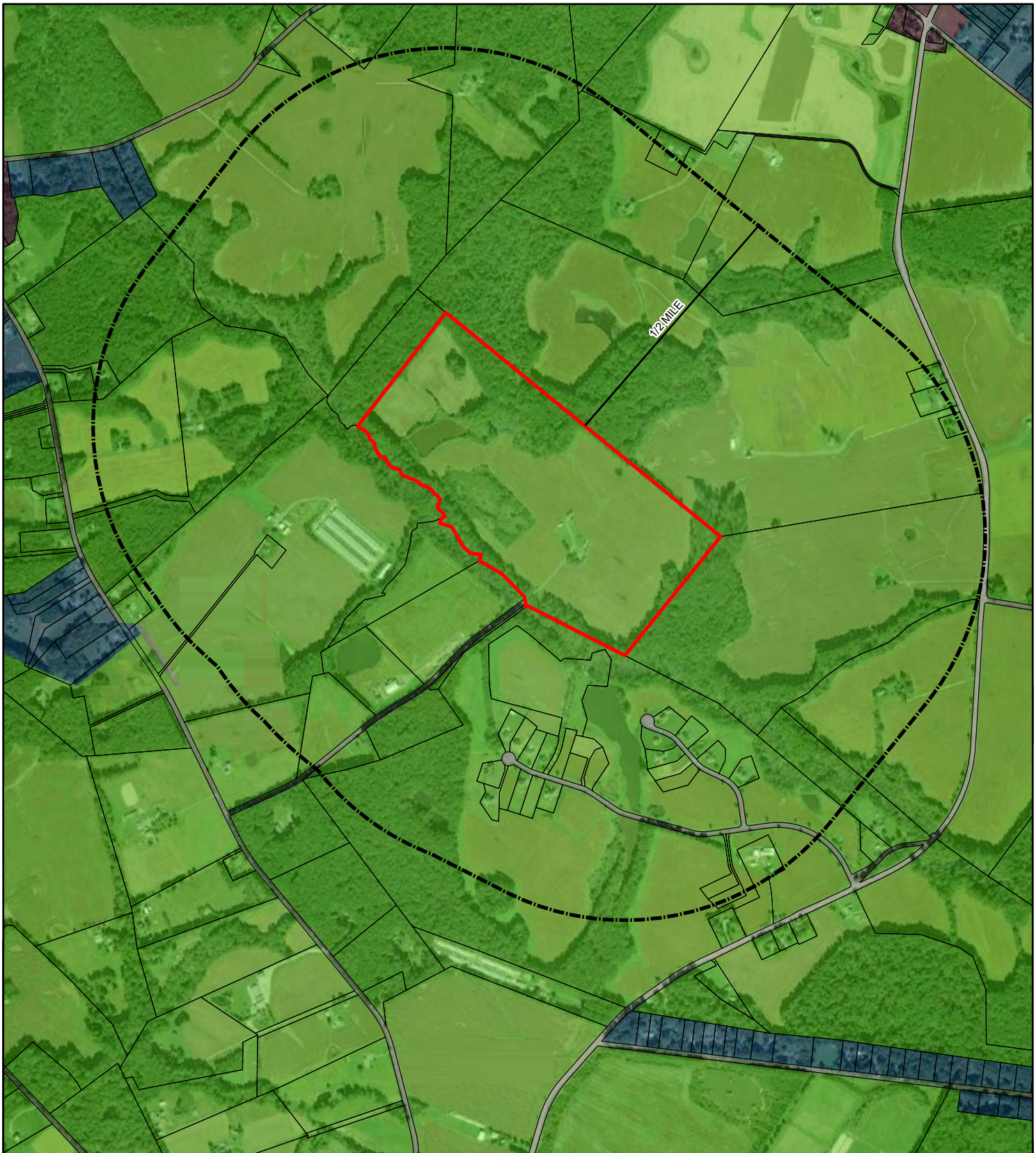
	SURVEY CONTROL POINT
	5' MAJOR PROPOSED CONTOUR (FT-MSL)
	1' MINOR PROPOSED CONTOUR (FT-MSL)
	5' MAJOR EXISTING CONTOUR (FT-MSL)
	1' MINOR EXISTING CONTOUR (FT-MSL)
	SPOT ELEVATION
	UTILITY POLE
	OVERHEAD WIRE
	APPROXIMATE LIMIT OF LINER
	SURFACE WATER / STREAM (NOTE 1)
	TREE LINE
	EXISTING FENCE
	PROPERTY LINE (NOTE 5)
	RIPRAP
	ACCESS ROAD
	GROUNDWATER MONITORING WELL (APPROXIMATE LOCATION) (NOTE 6)
	LANDFILL GAS PROBE (APPROXIMATE LOCATION) (NOTE 6)

NOTES:

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2. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83/2011) MARYLAND STATE PLANE - U.S. SURVEY FT.
3. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4. PROPERTY BOUNDARY AND PARCEL INFORMATION OBTAINED FROM QUEEN ANNE'S COUNTY GIS DATA DOWNLOAD SITE ON 23 MARCH 2021. ([HTTPS://WWW.QAC.ORG/912/GIS-DATA-DOWNLOAD](https://www.qac.org/912/gis-data-download)).

FINAL GRADING PLAN	
Midshore III Regional Landfill Centreville, Queen Anne's County, Maryland	
PROJECT NO: ME2008	FIGURE 3
	JULY 2021

P:\CADD\PROJECTS\MIDSHORE III\FIGURES\ME2008\F03



Legend

- Approximate Site Boundary
- Half Mile Site Boundary Buffer
- Parcels
- General Zoning**
- Agriculture
- Mixed Use
- Residential

Notes

Zoning information provided by Queen Anne's County GIS on 23 March 2021. Zoning adopted March 2021. Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Zoning Map

Midshore III Regional Landfill
Centreville, Queen Anne's County, Maryland

Geosyntec
consultants

Figure

4

Columbia, Maryland

May 2021



- CaA - Carmichael loam, 0 to 2 percent slopes
- DOE - Downer soils, 15 to 30 percent slopes
- DUD - Downer and Unicorn soils, 10 to 15 percent slopes
- HnA - Hammonton sandy loam, 0 to 2 percent slopes
- HnB - Hammonton sandy loam, 2 to 5 percent slopes
- HvA - Hurlock sandy loam, 0 to 2 percent slopes
- IgB - Ingleside sandy loam, 2 to 5 percent slopes
- IgC - Ingleside sandy loam, 5 to 10 percent slopes
- KnA - Kentuck mucky silt loam, 0 to 2 percent slopes
- LO - Longmarsh and Indiantown soils, frequently flooded
- MkB - Matapeake silt loam, 2 to 5 percent slopes
- MqA - Mattapex-Butlertown silt loams, 0 to 2 percent slopes
- MqB - Mattapex-Butlertown silt loams, 2 to 5 percent slopes
- NsA - Nassawango silt loam, 0 to 2 percent slopes
- OIA - Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain
- PIA - Pineyneck silt loam, 0 to 2 percent slopes
- PiB - Pineyneck silt loam, 2 to 5 percent slopes
- UsA - Unicorn-Sassafras loams, 0 to 2 percent slopes
- UsB - Unicorn-Sassafras loams, 2 to 5 percent slopes
- W - Water
- WhA - Whitemarsh silt loam, 0 to 2 percent slopes

Legend

- Soil Unit
- Approximate Site Boundary

Notes

The map is generated from the USDA-NRCS certified Soil Survey Area for Queen Anne's County, Maryland as of Version 17, Jun 11, 2020. Soil map units are labeled (as space allows) for map scales 1:50,000 or larger. Date(s) aerial images were photographed: Jun 16, 2014—Oct 20, 2017.



USDA Soil Distribution Map
 Midshore III Regional Landfill
 Centerville, Queen Anne's County, Maryland

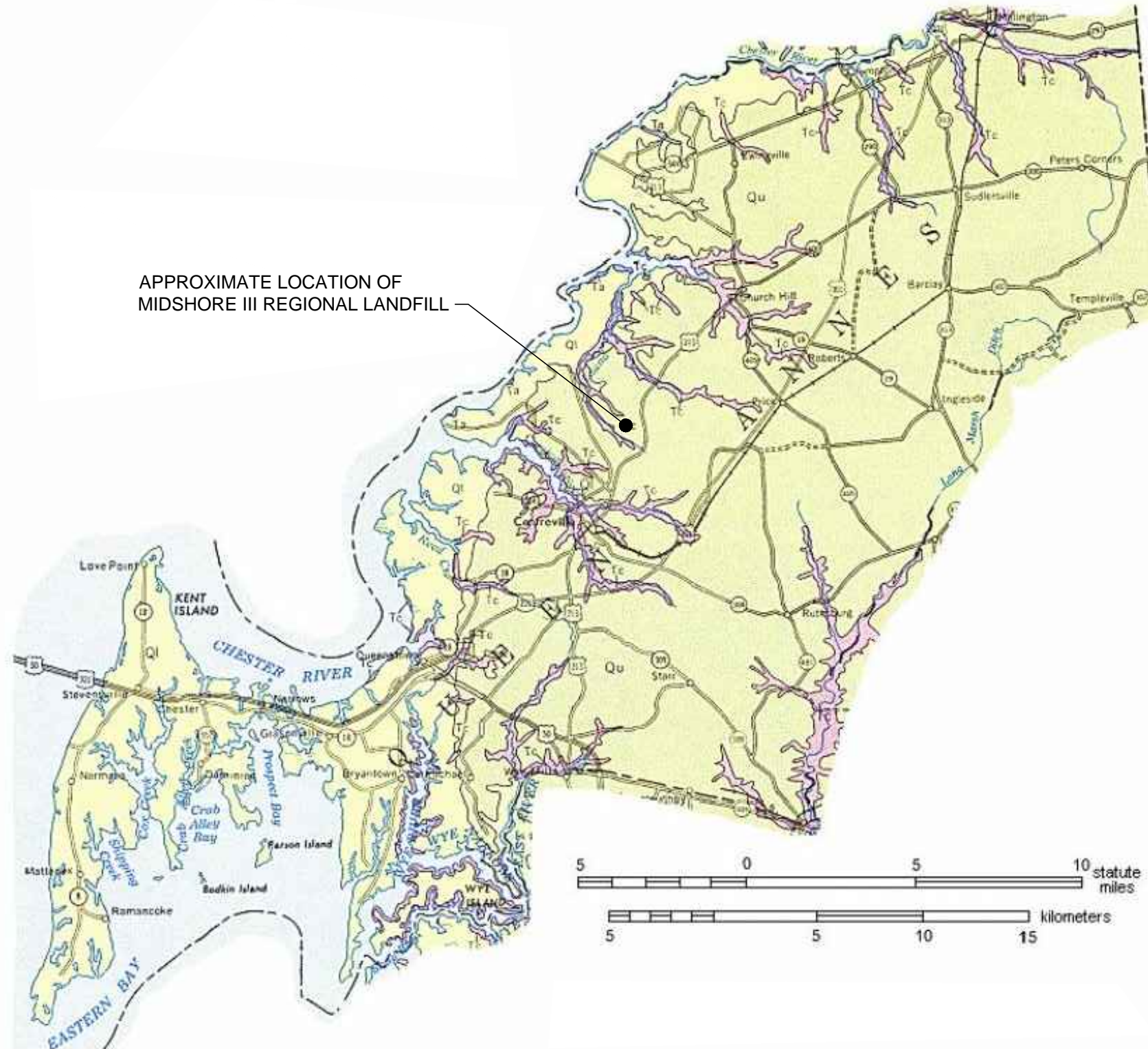


Figure

5

Columbia, Maryland

May 2021



APPROXIMATE LOCATION OF
MIDSHORE III REGIONAL LANDFILL

LEGEND

- Ql Lowland Deposits**
 Gravel, sand, silt and clay. Medium- to coarse-grained sand and gravel; cobbles and boulders near base; commonly contains reworked Eocene glauconite; varicolored silts and clays; brown to dark gray lignitic silty clay; contains estuarine to marine fauna in some areas (includes in part Pamlico, Talbot, Wicomico and Sunderland Formations of earlier reports); thickness 0 to 150 feet.

- Qu Upland Deposits (Eastern Shore)**
 Gravel, sand, silt, and clay. Mostly cross-bedded, poorly sorted, medium- to coarse-grained white to red sand and gravel, boulders near base; minor pink and yellow silts and clays; (Wicomico Formation of earlier reports); thickness 0 to 90 feet, locally thicker in paleochannels.

- Ta Aquia Formation**
 Dark green to gray-green, argillaceous, highly glauconitic, well sorted fine- to medium-grained sand; locally indurated shell beds; thickness 0 to 100 feet.

- Tc Calvert Formation**
 Plum Point Marls Member: Interbedded dark green to dark bluish-gray, fine-grained argillaceous sand and sandy clay; contains prominent shell beds and locally silica-cemented sandstones. Fairhaven Member: Greenish-blue diatomaceous clay, weathers to pale gray; pale brown to white, fine-grained argillaceous sand and greenish-blue sandy clay; total thickness 0 to 150 feet.

- Fault**

- Formation boundary; where absent indicates unresolved boundary between formations due to differing interpretation.**



NOTES

1. ADAPTED FROM MARYLAND GEOLOGICAL SURVEY'S GEOLOGIC MAP OF MARYLAND (1968).
2. BASE MAP FROM ARMY MAP SERVICES SHEETS, 1:250,000 CULTURE PARTLY REVISED, 1967.

SURFACE GEOLOGIC MAP OF QUEEN ANNE'S COUNTY

Midshore III Regional Landfill
Centreville, Queen Anne's County, Maryland



FIGURE

6

PROJECT NO: ME2008

MAY 2021

ATTACHMENT 1

REFUSE DISPOSAL PERMIT APPLICATION FORM

Refuse Disposal Permit Application

Authority: Title 9, Environment Article, Annotated Code of Maryland, and Code of Maryland Regulations (COMAR) 26.04.07
 Municipal landfills also see 40 CFR Part 258 and EPA guidance for additional requirements.

Application for: **New Permit** **Renewal Permit**

Existing Permit No. _____ - _____ - _____ Issued Date: ____/____/____ Expiration Date: ____/____/____

Applicant's Legal Name: Maryland Environmental Service

Applicant's Status: **Individual** **Corporation** **Government** **Other:**

Federal Employer Identification No.: _____

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

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: 909199

Applicant's Mailing Address: 259 Najoles Road City: Millersville State: MD Zip Code: 21108

Applicant's Telephone No. (410) 729 - 8200 Facsimile No.: (410) 729 - 8220

Emergency Contact Name & Title: Gary Lasako, Senior Project Manager Telephone No.: (410) 729 - 8373

Facility/Site Name: Midshore III Regional Solid Waste Facility

Facility/Site Address: Harper Road City: Centreville State: MD Zip Code: 21617

County: Queen Anne's Maryland Grid Coordinates: 518,000 N / 1,582,500 E

County Zoning Map No.: 0028 Lot/Parcel No.: p.40 Deed/Liber/Folio No.: NWM/00375/00578

State Legislative District: 36 Local Council / Election District: 2

Bay Tributary Watershed Code: 02130508 Latitude/Longitude (Deg/Min/Sec): 39 - 05 - 08 / 76 - 03 - 06

Site Acreage: 124 Facility Acreage (Estimated): 90

Type of Solid Waste Acceptance Facility

- Municipal Landfill**¹ **Rubble Landfill**^{1,3} **Industrial Landfill**¹ **Land Clearing Debris Landfill**¹ **Incinerator**^{1,2}
- Transfer Station**¹ **Processing Facility**² **Processing Facility & Transfer Station**^{1,2}

Notes: 1. Financial Security is required for a privately owned facility. 2. Air Quality Permit may be required. 3. Groundwater Discharge Permit may be required.

Proposed Days & Hours of Operation: Mon-Fri from 7am to 3:30pm and Sat from 7am to 12:30pm

Provide a brief description of solid waste handling and other activities to be conducted at this facility:

Activities to be conducted at this facility include landfill disposal.

If available, attach the following documentation required for permit issuance:

- A written statement from the County in which the proposed facility is to be located, demonstrating that the proposed facility meets all applicable County zoning and land use requirements and is in conformity with the County Solid Waste Management Plan, in accordance with §9- 210(a)(3) of the Environment Article.
- For an incinerator, a written statement from the County where the proposed facility is to be located, demonstrating that the County has an approved Recycling Plan in accordance with §9-204.1 and §9-505 of the Environment Article.
- For a rubble landfill, a written statement from the County in which the proposed facility is to be located, demonstrating that the County has specified in the County Solid Waste Plan the types of waste that may be disposed of in the facility, in accordance with §9-210(c) of the Environment Article.

Provide the estimated amount of solid waste to be accepted in Tons (T) or Cubic Yards (CY) from the following facilities and sources:

- | | |
|---|--|
| <p>A. Intermediate Facilities:</p> <p>Processing Facilities _____</p> <p>Transfer Stations _____</p> <p>Incinerators _____</p> | <p>B. Origin Of Waste By Region:</p> <p>Within Jurisdiction _____ see next page</p> <p>Out-of-County in Maryland _____</p> <p>Out-of-State (Specify Name) _____</p> |
|---|--|

Please indicate the estimated amount of solid waste in Tons (T) or Cubic Yards (CY) to be accepted at this facility. This list will be used to determine the type of permit and the list of acceptable materials that will be allowed under the permit for which you are applying.

Type of Waste	1 st Year (Tons)	5 th Year (Tons)
Residential (household refuse, domestic waste, garbage, etc.)	70,648	74,786
Commercial (waste from businesses, stores, offices, etc.)	48,891	51,754
Industrial (non-hazardous sludge, dust, off-spec products, etc. from industrial or manufacturing operations or processes)	0	0
Construction and Demolition (lumber, masonry, drywall, etc.)	24,963	26,425
Land Clearing Debris (stumps, limbs, leaves, earthen material, etc.)	6,449	6,827
Agricultural (crop residue, manure, unprocessed materials, etc.)	0	0
Institutional (non-hazardous waste from schools, hospitals, etc.)	8	9
Special Medical Waste (infectious waste from hospitals, doctor's offices, research labs, etc.)	0	0
Animal Carcasses (road kills, farm animals, etc.)	53	56
Bulky Waste (appliances, furniture, etc.)	56	59
Litter (street sweepings, municipal wastebaskets, etc.)	0	0
Scrap Tires (automobiles, trucks, etc.) - Requires a separate license for handling or managing tires.	366	388
Sewage Sludge or Septage - Requires separate permit for sewage sludge utilization.	4,017	4,252
Water Treatment Plant Sludge (alum precipitate, etc.)	0	0
Hazardous Waste (from chemical plants, gas stations, etc.)	0	0
Asbestos (shingles, insulation, etc.) - Requires special training and handling	121	128
Incinerator Ash (from incinerators, waste-to-energy incinerators, special medical waste incinerators, boilers, etc.)	0	0
Fly Ash (pollution abatement equipment dusts & bottom ash from coal fired electric generating plants)	0	0
Other (list):	270	285
Total	155,842	164,969

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 proposed 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

Dr. Charles Glass, Ph.D., P.E.

Applicant's Name (Print)

06/28/2022

Date

Executive Director

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.

For questions regarding this application form, please contact the Department at (410) 537-3315

ATTACHMENT 2

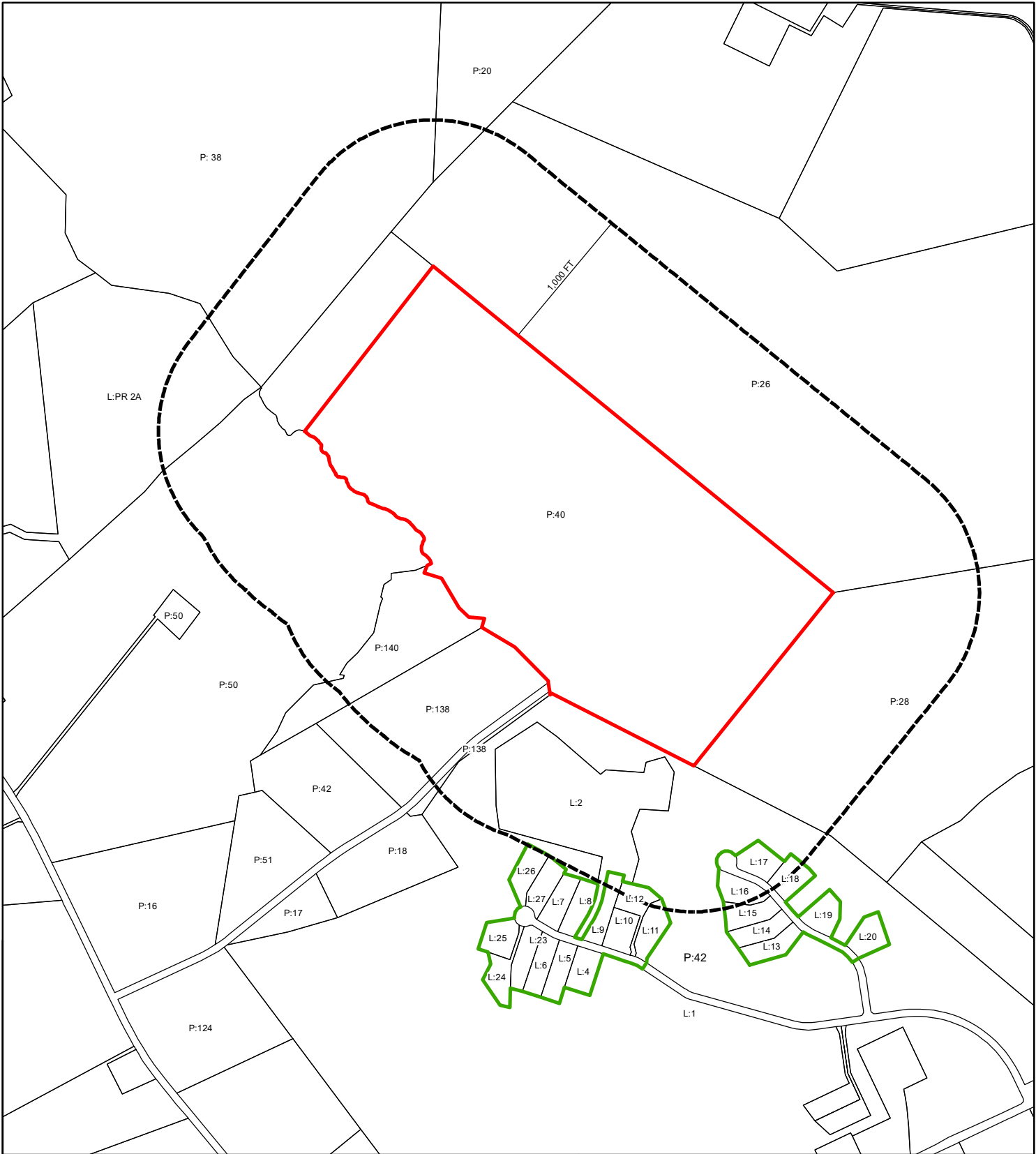
**PROPERTY OWNERS IN PROXIMITY OF 1,000-FT
RADIUS OF SITE OR ABUTTING ENTRANCE ROAD**

**ATTACHMENT 2
PROPERTY OWNERS IN PROXIMITY OF 1,000-FT
RADIUS OF SITE OR ABUTTING ENTRANCE ROAD
MIDSHORE III REGIONAL SOLID WASTE FACILITY
CENTREVILLE, QUEEN ANNE'S COUNTY, MARYLAND**

OWNER NAME	STREET LOCATION ¹	OWNER OCC ²	PARCEL ³	LOT
QUEEN ANNE'S FARM & LAND	129 GRAYS POND LN	N	42	14
BURNS ALLEN D TRUSTEE	135 GRAYS POND LN	H	42	15
QUEEN ANNE'S FARM & LAND	125 GRAYS POND LN	N	42	13
MILLIGAN KARL III	116 GRAYS POND LN	H	42	20
KING EVELYN A	122 GRAYS POND LN	H	42	19
DUTTON BRAD	136 GRAYS POND LN	H	42	18
HOOVER JAMES SCOTT	200 TRAVELED LN	H	20	-
HAMMER EDWARD C	151 HAMMER RUN	H	39	PR 2A
DEMATTIA ANDREW R	141 GRAYS POND LN	H	42	16
DUTTON E BROOKS TRUSTEE	144 GRAYS POND LN	H	42	17
CANNON JOHN M & LAURA L T	184 STOWMAN FARM LN	H	50	3
PAYNE FARM LLC	460 COON BOX RD	N	38	3
HAMMER FAMILY FARM LLC	2309 CHURCH HILL RD	N	26	-
COUNTY COMMISSIONERS OF QUEEN ANNE	401 HARPER RD	N	138	-
KIMBLE JAMES WEBSTER III	2215 CHURCH HILL RD	N	28	-
TUTTLE JOHN L	110 HARPER RD	H	124	TR 1
GARDINI BRYAN W	130 HARPER RD	H	17	-
TOLSON RANDAL M	508 BURRISVILLE RD	H	16	-
GRAY W CALVIN JR	HARPER RD	N	18	
QUEEN ANNE'S FARM & LAND	127 HARPER RD	N	51	-
COUNTY COMMISSIONERS OF QUEEN ANNE	HARPER RD	N	42	-
CANNON VERNON M	184 STOWMAN FARM LN	H	50	2
CANNON VERNON M	STOWMAN FARM LN	N	50	2
QUEEN ANNE'S FARM & LAND	SHREWSBURY FARM LN	N	42	1
BROWN JENNIFER	323 SHREWSBURY FARM LN	H	42	4
BROWN MICHAEL D	403 SHREWSBURY FARM LN	N	42	5
SCHROEDER JAMES E	409 SHREWSBURY FARM LN	N	42	6
DIXON GLENN E III	417 SHREWSBURY FARM LN	N	42	23
DIXON GLENN III	423 SHREWSBURY FARM LN	H	42	24
TRICE F WINFIELD JR	429 SHREWSBURY FARM LN	H	42	25
HALL JOHN M	314 SHREWSBURY FARM LN	N	42	10
TWIN L VENTURES LLC	308 SHREWSBURY FARM LN	N	42	11
SHAFFER JERRY L	302 SHREWSBURY FARM LN	N	42	12
KYLE WILLIAM A	404 SHREWSBURY FARM LN	H	42	8
FARMER JAMES H II	410 SHREWSBURY FARM LN	H	42	7
HALL JOHN M	322 SHREWSBURY FARM LN	N	42	9
FEVOLA DOMENICO M	422 SHREWSBURY FARM LN	H	42	27
BEALL MICHAEL R	428 SHREWSBURY FARM LN	H	42	26
SHAFFER JONATHAN D	340 SHREWSBURY FARM LN	D	42	2
COUNTY COMMISSIONERS OF QUEEN ANNE'S COUNTY	140 TOWMAN FARM LN	N	140	-

NOTES:

- (1) The street address assigned by the local government. It includes the street number and street name as well as any directions and street types. Note that it is not necessarily the same as the mailing address.
- (2) This indicates whether the property is the owner's principal residence. A principal residence will have an H or D in this field. Other property types will have an N in this field.
- (3) Identifies the parcel number of the property as shown on Figure A.1. A parcel may be one account or may encompass several accounts if it has been subdivided.



Legend

- SiteBoundary
- 1000 ft Site Boundary Buffer
- Parcels
- Subdivisions included in attached table of property owners

Notes

1. Property information provided by Queen Anne's County GIS on 23 March 2021.
2. Where one lot within a parcel is within 1,000 ft of the site, all other lot owners within that parcel are also included. Properties adjacent to Harper Road, the access road into the facility, are also included for notification purposes.



Property Owners in Proximity of 1,000-Ft Radius of Site or Abutting Entrance Road

Midshore III Regional Landfill
 Centreville, Queen Anne's County, Maryland



Columbia, Maryland

June 2021

Figure

A.1

ATTACHMENT 3

FAA DETERMINATION OF NO HAZARD TO AIR
NAVIGATION



Notice Criteria Tool

[Notice Criteria Tool - Desk Reference Guide V_2018.2.0](#)

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference [CFR Title 14 Part 77.9](#).

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...) and once adjusted upward with the appropriate vertical distance would exceed a standard of 77.9(a) or (b)
- your structure will emit frequencies, and does not meet the conditions of the [FAA Co-location Policy](#)
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your proposed structure will be in proximity to a navigation facility and may impact the assurance of navigation signal reception
- your structure will be on an airport or heliport
- filing has been requested by the FAA

If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the [Air Traffic Areas of Responsibility map](#) for Off Airport construction, or contact the [FAA Airports Region / District Office](#) for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

Latitude:	<input type="text" value="39"/> Deg	<input type="text" value="05"/> M	<input type="text" value="12.76"/> S	<input type="button" value="N"/> ▼
Longitude:	<input type="text" value="76"/> Deg	<input type="text" value="2"/> M	<input type="text" value="46.47"/> S	<input type="button" value="W"/> ▼
Horizontal Datum:	<input type="button" value="NAD83"/> ▼			
Site Elevation (SE):	<input type="text" value="50"/> (nearest foot)			
Unadjusted Structure Height :	<input type="text" value="190"/> (nearest foot)			
Height Adjustment:	<input type="text" value="10"/> (nearest foot)			
Total Structure Height (AGL):	<input type="text" value="200"/> (nearest foot)			
Traverseway:	<input type="button" value="Private Road"/> ▼			
	<small>(Additional height is added to certain structures under 77.9(c)) User can increase the default height adjustment for Traverseway, Private Roadway and Waterway</small>			
Is structure on airport:	<input checked="" type="radio"/> No <input type="radio"/> Yes			

Results

You do not exceed Notice Criteria.