

**Accomack County, Virginia
2024 Solid Waste Management Plan**



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ACCOMACK COUNTY REVIEWS AND APPROVAL

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Acronyms

A-NPDC	Accomack-Northampton Planning District Commission
CDD	Construction and Demolition Debris
DEQ	(Virginia) Department of Environmental Quality
GDP	Gross Domestic Product
HDPE	High Density Polyethylene
LLDPE	Linear Low-Density Polyethylene
MSW	Municipal Solid Waste
NLF	Northern Landfill
PCB	Polychlorinated biphenyls
PRM	Principal Recyclable Material
PVC	polyvinyl chloride
SER	System Evaluation Report
SLF	Southern Landfill
SRMs	Supplemental Recyclable Materials
STS	South Transfer Station
SWC	Solid Waste Committee
SWIA	Solid Waste Information & Assessment
SWMP	Solid Waste Management Plan
USEPA	United States Environmental Protection Agency
VAC	Virginia Administrative Code
VDEQ	Virginia Department of Environmental Quality
VDOT	Virginia Department of Transportation
VEC	Virginia Employment Commission
VPA	Virginia Pollution Abatement
VSWMR	Virginia Solid Waste Management Regulations
VSWPRR	Virginia Solid Waste Planning and Recycling Regulation

EXECUTIVE SUMMARY

This Solid Waste Management Plan (SWMP or Plan) was written by the Accomack Public Works Solid Waste Management Team to satisfy requirements of Virginia Solid Waste Management Regulations (VSWMR) found in 9VAC 20-130 ⁽¹⁾ and establishes solid waste management planning and recycling practices for the protection of public health, public safety, the environment and natural resources throughout the planning area comprised of Accomack County and the 14 incorporated towns of Accomack, Belle Haven, Bloxom, Chincoteague, Hallwood, Keller, Melfa, Onancock, Onley, Painter, Parksley, Saxis, Tangier and Wachapreague. In doing so, this plan provides for environmentally sound solid waste management that is compliant with Virginia Department of Environmental Quality (VDEQ) regulations and makes the most effective and efficient use of available resources over a minimum of a 20-year planning period extending from 2024 through at least 2044.

Current methods for handling solid waste within Accomack County and incorporated towns consist primarily of the collection of solid waste by various public and/or private haulers, transfer of waste materials from the southern end of the County via the South Transfer Station (STS), located next to the former Southern Landfill (SLF) facility and disposal at the Accomack County Northern Landfill (NLF) facility. The County also maintains a current network of 7 public drop-off and convenience centers for the collection of solid waste and recyclables.

The Accomack County Board of Supervisors has established a Community Solid Waste Committee to support the Solid Waste Management team by reviewing activities, to help with the drafting and successful implementing of this SWMP.

The NLF Western Expansion design permit request for solid waste cells 7-11 during the last planning period was approved on December 20, 2020. This approval provides solid waste disposal capacity for the next 27 years. Cell 7 has already been constructed and opened, allowing closure of cell 6A which was part of the NLF southern expansion.

Recycle rates for the county are still above the state mandatory 15 percent recycling rate for planning units with a population density rate of less than 100 persons per square mile based on the most recent United States Census. The recycling rates reported in the County for 2017-2022 averaged 34.6 percent due in large part to the very efficient use of the 7 public drop-off and convenience centers located throughout the county.

The county awarded new recycle and glass recycle contracts in 2023 which will help reduce solid waste disposal and increase county recycle rates.

During the last planning period the county also procured a vacuum truck for roadside litter pick-up and is currently going through the process to put a dedicated team in place for manning it.

The county continues to partner with community organizations such as Waste Watchers and the Virginia Department of Transportation (VDOT) to help remove litter from county roadsides and land sites which has been a great help in reducing litter throughout the county.

This SWMP provides a comprehensive plan for continuing the great work accomplished by the Accomack County Solid Waste Management Team and the community, business and volunteer partners.

Section A: Basic Planning Elements

1. This Solid Waste Management Plan (SWMP) addresses very specific requirements in Virginia Administrative Code (VAC), Virginia Solid Waste Planning and Recycling Regulation (VSWPRR) 9VAC20-130-120 “Planning Requirements”.

2. The SWMP includes objectives for implementing and tracking an integrated waste management strategy to support and promote the hierarchy outlined in the 9VAC20-130-30 “Policy” regulation. The SWMP gives priority to preferred alternatives for source reduction, reuse, recycling, resource recycling, incineration and landfilling.

3. The schedule for incremental stages to meet 20-year needs and objectives for implementing the goals of the SWMP as required in 9VAC20-81-450 “Effect of the permit” are provided to manage solid waste facility names and facility capacities in **Table 11** which can be found in Section C.4 of this plan.

4. The strategy for the provision of necessary funds and resources including any fees required to meet current and future solid waste management facility needs are included in this SMWP.

5. Funding strategy to support the execution of this SWMP are detailed in section C.5 Milestones, Funding and Program Execution Responsibilities.

6. Public education and information strategies to inform the community members including the private sector on how they can be involved in supporting reduction, reuse and recycling goals can be found in section C.7 of this plan.

7. This SWMP also includes the strategy for continuing partnerships with both public and private sectors and developing new opportunities for incorporating plan goals into their current and future operations can be found in section C.7 of this plan.

Section B: Minimum Recycling Rates

This SWMP continues the proven strategies for meeting and exceeding the minimum recycling rates as specified in the § Code of Virginia 10.1-1411 “Regional and

Local Solid Waste Management Plans” for planning units with a population density rate of less than 100 persons per square mile based on the most recent United States Census. According to the 2020 United States Census Data, Accomack County has a population density of 74.4 persons per square mile that was used to determine the recycling rate requirement of 15% for this SWMP. **Table 8** “Recycling Rates” found in section C.3.b shows the achieved recycling rates for 2017-2022. The average recycling rate is 38% with 2021 being the lowest year with a rate of 22.7%.

Section C: Solid Waste Management Data and Analyses

C.1. Population Projections for 20+ years and Development Patterns

C.1. a. Population Projections for 20+ years

The population of Accomack County based upon the most recent 2020 United States Census data has been relatively stable at approximately 33,200 people and is shown in **Table 1** below:

Table 1 – Population of Accomack County			
April 1, 2010 Census	July 1, 2022 Census Estimate	Population Change	Percentage Change
33164	33191	27	>.01%

Based upon most recent 2020 United States Census Data

The Virginia Employment Commission (VEC) 2017 Annual Report ⁽⁶⁾, indicated that the population is projected to increase at a rate of less than 1% through 2040. However, the 2023 Annual Report indicates that the population is expected to decline over the next 22 years shown in **Table 2**. It is unclear why there was such a significant change in the forecast, but the report admits “*we understand projections further out are subject to a lot of uncertainty. We plan to consistently revise and update these numbers to ensure the best possible data is available and are currently developing updated*

population projections that will incorporate more recent changes. Given the relatively stable trend in population since the last census, for planning purposes, it is assumed that the population will remain relatively flat through 2040.

Table 2 – Expected Population of Accomack County				
	September 2018 Report		October 2023 Report	
Year	Population	% Change	Population	% Change
2010	33164		33164	0.00%
2020	33432	0.81%	33775	1.84%
2030	33568	0.41%	30369	-10.08%
2040	33661	0.28%	26615	-12.36%

Data based on Virginia Employment Commission (VEC) Annual Reports

An important consideration with respect to population estimates is the impact of the tourist industry, particularly in the northern end of the County. The Chincoteague Visitors Center assists more than 23,000 people annually and waste disposal at the Chincoteague and Horntown Convenience Centers notably increases during tourist season. This is expected to increase with the addition of several new hotels and a resort community built on the Island of Chincoteague. This additional influx of people, at least for a portion of the year, impacts solid waste disposal within the County.

C.1.b. Development Patterns

The types of occupations and businesses within the planning area affects the types of wastes generated. The various economic profiles provided in the Virginia Employment Commission (VEC) 2023 Annual Report includes the following breakdown of employment by industry in Accomack County **Table 3**. Note the general trends have not changed significantly since 2018 except for a 1% Change plus or minus in some of the industries even though the overall number of people employed dropped 9% in the 2023 report.

Industry	2018		2023	
	No. of People employed	Percentage	No. of People employed	Percentage
Agriculture, Forestry, Hunting, Fishing	146	1%	174	1%
Construction	374	3%	320	3%
Manufacturing	3367	26%	2864	24%
Trade	2444	19%	2067	18%
Transportation, Public Utilities	109	1%	145	1%
Finance, Insurance, Real Estate	399	3%	469	4%
Admin Support and Waste Management	190	1%	255	2%
Accommodation and Food Services	967	8%	1014	9%
Health Care and Social Assistance	1556	12%	1314	11%
Government	2848	22%	2687	23%
Services	458	4%	423	4%
Total	12834	100%	11732	100%

Data based on Virginia Employment Commission (VEC) 2018 and 2023 Annual Reports

The major employers in Accomack County are listed in **Table 4** below. As was the case in 2018, the top two employers are related to poultry processing.

Table 4 – Major Employers in Accomack County			
Rank	Company Name	Rank	Company Name
1	Perdue Products	14	Eastern Shore Community College
2	Tyson Farms	15	Marconi Technology
3	Accomack County School Board	16	Therapeutic Interventions
4	Riverside Regional Medical Center	17	The Hermitage
5	County of Accomack	18	U.S. Department of Defense
6	National Aeronautics & Space Administration	19	Postal Service
7	LJT Associates Inc	20	McDonalds
8	Wal Mart	21	A & N Electric Co-op
9	Eastern Shore Community Services	22	VDOT
10	Eastern Shore Rural Health System	23	Town of Chincoteague
11	URS Federal Services	24	U.S. Department of Agriculture
12	Food Lion	25	Caring Touch Health Services
13	Royal Farms 79		

These businesses produce municipal solid wastes as well as some industrial process wastes that are disposed of in the County landfill.

C.2. Planning Area Conditions Impacting Solid Waste Management

Accomack County is geographically isolated from the rest of Virginia which is one of the key reasons why the County has provided solid waste disposal to its residents and businesses since the early 1990s. The County would like to continue to provide these essential services well into the future which is important to the long-term economic stability and high quality of life of the planning area residents and businesses.

C.2.a. Urban Concentrations

Accomack County is located on the Eastern Shore on the northern half of the Virginia Peninsula. The County of Accomack encompasses several communities, rural areas, and the incorporated towns of Accomac, Belle Haven, Bloxom, Chincoteague, Hallwood, Keller, Melfa, Onancock, Onley, Painter, Parksley, Saxis, Tangier and Wachapreague. **Figure 1** indicates the planning area along with the major roadway systems in Accomack County. The more populated areas are centered along the main highway, throughout the length of the county, the remaining areas are largely rural and sparsely populated. These factors make certain aspects of solid waste management such as waste collection and recycling more of a challenge than in smaller, heavily populated urban areas.

C.2.b Geographic Conditions

Solid waste management in Accomack County is strongly influenced by its rural nature in conjunction with unique coastal physiographic features. The County's land mass of approximately 456 square miles is defined partly by narrow elongated boundaries between the Chesapeake Bay and Atlantic Ocean, but moreover characterized by numerous waterways and resulting 'necks of land' which limit or constrain interconnecting loops in the roadway system.

C.2.c. Economic Growth and Development

Waste management planning must consider the impact of economic development on waste generation. Economic growth in Accomack County during the planning period is expected to be consistent with the growth illustrated in the population projections. Accomack County is part of the Accomack-Northampton Planning District Commission (A-NPDC) which includes the Counties of Accomack and Northampton.

The County has one main Industrial Park near the Town of Melfa and the Accomack County Airport. The industrial park has multiple tenants and provides them with both water and waste water utilities. Additionally, the Wallops Research Park also in the county is expected to increase regional economic development within the planning area.

Current drinking water and waste-water services within the County include water and waste-water plants in the Towns of Chincoteague, Parksley, Onancock and Tangier. The construction or planned construction of additional utilities within the planning area provides another measure of economic growth potential.

C.2.d. Markets for Reuse and Recycling of Materials

Reuse is finding a secondary use for a product in the home or business which contributes to recycling of materials. Rather than throwing the product in the trash it can be used as a substitute for other consumer items, delaying its entry into the waste stream. The public information officer encourages reuse of products and materials prior to disposal. The public information officer also continually looks for markets and partners with the county for recycling of the products and materials collected at our landfills and public drop-off and convenience centers. Some examples of how these products and materials are marketed to consumers and businesses are:

- Locating clothing and shoe donation collection boxes at the county public drop-off and convenience centers for reuse by charities and the textile industry
- Industrial repair and reuse of wood pallets

- Collection at designated convenience centers for computers and other electronic goods for recycling of precious metals for reuse in new products
- Encourage purchase of reusable items instead of one-use or throw away items
- Reuse of waste water sludge as a soil amendment at the landfills

C.2.e. Transportation Conditions

The transportation network primarily affects the collection of solid waste but also becomes a factor in decisions regarding disposal of the waste. U.S. Highway 13 is the main highway in Accomack County and runs along the entire length of the Virginia Peninsula. Access to Interstate 64 or 664 lies approximately 60 miles to the south of Belle Haven, across the Chesapeake Bay Bridge-Tunnel. No major road projects are currently being planned by the Virginia Department of Transportation (VDOT) for Accomack County.

C.3. Solid Waste and Recycling Estimates

C.3.a. Solid Waste

Available records on solid waste managed in Accomack County are primarily kept by Accomack County and include quantities of MSW disposed of via the various County landfills or recycled by the County. For wastes handled at the County landfill the quantities are measured by weigh scales. Tire quantities are sometimes measured on a tire basis (in contrast to a weight basis), since tires are processed by type. Records on the quantities of materials that are recycled without going to a county landfill are kept in the normal course of business with recyclers or are estimated. The County also gathers information annually from local industry regarding amounts of materials the industries are recycling. The MSW disposal and recycling metrics for 2017-2022 are summarized below in **Table 5**.

	Units	2017	2018	2019	2020	2021	2022
Total Recycling	tons/year	40,620	33,377	33,377	21,895	7,761	8,140
Total MSW Disposal	tons/year	36,336	36,336	36,336	38,987	30,984	29,339
Diversion/Recycling Rate	%	54.8%	49.9%	49.9%	40.2%	22.7%	24.4%
MSW Disposal	lbs./capita/day	6.7	5.5	5.5	3.6	1.3	1.3

Based on data from Accomack County Annual Recycling Rate Reports – Appendix A

The quantity of solid waste generated varies based on numerous factors such as population, commercial development, changes in packaging materials, changes in information technology (online newspapers, home computers), and economic activity. Nationwide, the trend in per capita municipal solid waste generation rates increased significantly from 1960 to 1990, largely as a function of our nation's Gross Domestic Product (GDP) but has leveled off since 1990.

The County's resulting MSW generation/disposal rate (from 2017-2022) ranges from 1.3 to 6.7 pounds per capita per day. Additional details are contained within annual recycling reports summarized in **Appendix A**. The anticipated total solid waste disposal is anticipated to remain above 35,000 tons per year as reflected in **Table 5**. Waste composition data from 2003, 2017 and 2022 is provided in **Table 6**.

	2003		2017		2022	
	Tons	% of Total	Tons	% of Total	Tons	% of Total
Household MSW	23,855	64.8%	28,145	77.5%	15,401	52.5%
Commercial Waste	11,911	32.4%	5,755	15.8%	10,503	35.8%
Institutional Waste	1,046	2.8%	2,436	6.7%	3,435	11.7%
Total MSW Disposed	36,812	100%	36,336	100%	29,339	100%

Based on data from Accomack County Annual Recycling Rate Reports – Appendix A

The dominant component in the County's waste stream is MSW. The Principal Recyclable Materials (PRM) breakdown for 2017 and 2022 breakdown of waste types within the County in **Table 7** below reflects a significant decrease for the last planning period. This trend is expected to continue at the 2022 levels for this planning period.

Table 7 – Breakdown of Waste Stream				
PRM MATERIALS	2017		2022	
	Tons	% of Total	Tons	% of Total
Paper	3,443	8.5%	ND	0.0%
Metal	2,013	5.0%	791	9.7%
Plastic	1,245	3.1%	166	2.0%
Glass	2,146	5.3%	0	0.0%
Comingled	8,359	20.6%	1,195	14.7%
Yard Waste	2,125	5.2%	2,807	34.5%
Waste Wood	3,017	7.4%	2,396	29.4%
Textiles	1,863	4.6%	101	1.2%
Waste Tires	1,908	4.7%	639	7.8%
Used Oil	4,075	10.0%	33	0.4%
Used Oil Filters	0	0.0%	0	0.0%
Used Antifreeze	0	0.0%	0	0.0%
Batteries	3,009	7.4%	11	0.1%
Electronics	445	1.1%	2	0.0%
Inoperative Motor Vehicles	0	0.0%	0	0.0%
Concrete, Brick, Block	4,500	11.1%	0	0.0%
Mulch	2,472	6.1%	0	0.0%
Total MSW Disposed	40,620	100%	8,141	100%

Based on data from Accomack County Annual Recycling Rate Reports – Appendix A

C.3.b. Recycling

The County's current network of 7 public drop-off and convenience centers to facilitate recycling with continuous collections has facilitated recycling rates that exceed the state mandatory 15 percent recycling rate for planning units with a population density rate of less than 100 persons per square mile based on the most recent United States Census.

. As previously indicated, the recycling rates reported in the County for 2017-2022 averaged 34.6 percent, as shown in **Table 8**

Accurate weight records will continue to be maintained to document the amount of recyclable materials received at the centers. The centers will be evaluated on an annual basis to determine their effectiveness and the need for adjustments in the type and number of recyclable containers.

These metrics show comparable performance with other similar municipalities despite having to rely upon less developed markets for recyclables and high collection and transportation costs associated with a rural County.

Calendar Year	2017	2018	2019	2020	2021	2022	Average
Recycling Rate %	54.8%	49.9%	49.9%	40.2%	22.7%	24.4%	34.6%

Based on data from Accomack County Annual Recycling Rate Reports – Appendix A

Recycling activities include the County's efforts to provide the public with municipal solid waste recycling opportunities as well as private recycling carried on in the commercial and industrial sectors. Drop-off locations for the public to recycle include the NLF and STS as well as the established network of public drop-off and convenience centers.

The NLF and STS accept, metals, white goods, used oil, batteries, and waste tires. The network of solid waste public drop-off and convenience centers including recycling accepts the following recyclables:

- Plastic drink bottles
- Milk jugs
- Detergent bottles
- Newspapers and inserts
- Magazines
- Catalogs
- Junk mail
- Office paper
- Brown cardboard boxes
- Brown paper bags
- Aluminum cans
- Steel/tin cans
- Telephone books
- Cereal boxes.

The following materials are also accepted in their separate containers:

- Tires (not currently available at Chincoteague)
- Used Motor Oil (up to 5 gallons per day, non-commercial)
- Lead Acid Batteries (one battery per day)
- Rechargeable batteries
- Cell phones
- Antifreeze (not currently available at Chincoteague)
- Scrap Metal (including appliances) are accepted at Fisher's Corner, Horntown, Chincoteague, and Makemie Park only.
- Glass is accepted at Fisher's Corner

There has been an impact observed in the glass bottle recycling market observed since 2018. The county has successfully awarded a new glass collections contract with the first collection occurring in June 2023. The convenience center at Fisher's Corner is the only location accepting glass as a pilot program at this time. The glass collection program could be extended to other convenience centers in the future depending on the success of the pilot program, expected volume estimates and funding availability.

The recent collapse in the United States recycling market could result in some waste diversion to the landfill, at least on a short-term basis.

In addition, re-usable items that are in good condition may be dropped off at "Put & Take" areas within any given facility with permission of the attendant on duty. Patrons may take items from these areas at any time the centers are open.

The County has been actively promoting recycling and recycling rates for the last 6 years and has exceeded the mandated rate of 15% for rural areas in the State. With the new glass recycling contract in place, it may be possible to reduce MSW disposal volumes during this planning cycle.

Accurate weight records will continue to be maintained to document the amount of recyclable materials received at the centers. The centers will be evaluated on an annual basis to determine their effectiveness and the need for adjustments in the type and number of recyclable containers.

No new recycling ordinances are considered necessary at this time. Voluntary reporting has been considered adequate and an ordinance requiring businesses or residents to recycle most likely would not prove beneficial.

C.3.c. Resource Recovery

Resource recovery (waste to energy) typically refers to post-collection facilities that produce a burnable product or incinerate solid waste to generate energy. Resource recovery involves a much more substantial capital outlay with extensive facility development costs, personnel costs and operating expenses. Commitment to resource recovery requires a commitment to:

1. Existing technology.
2. An existing facility which must be amortized over a lengthy time period regardless of its productivity.
3. Uncertainties over the future regulatory controls on the facility and its by-products.
4. A difficult siting problem, which is further complicated by the continued need for a landfill facility for ash generated by the facility and bypass waste.

5. Operation by highly skilled technical staff.

Resource recovery facilities typically require a large volume waste stream to be cost effective.

The county will continue to investigate new and innovation technologies that may be beneficial and cost effective for possible use in the future as a potential way to reduce MSW.

C.4. Existing and Planned Solid Waste Facilities and Operations

C.4.a. Solid Waste Existing and Projected Capacities

The Accomack County planning area historically consists of two landfill facilities located at the northern and southern ends of the county. The County's Southern Landfill (SLF) facility was closed December 31, 2012 pursuant to be in compliance with HB1205 and closure prioritization efforts throughout the Commonwealth. Additionally on May 16, 2023 Accomack County South Landfill DEQ Permit No.91 Corrective Action Plan was approved. This plan is based on pilot studies performed during 2021-2022 for methodologies to reduce both organic and inorganic (arsenic) constituents of concern in leachate groundwater at the SLF site. Currently on a quarterly schedule, potassium permanganate + potable water is being injected into wells specifically designed and located for that purpose. After each injection event a System Evaluation Report (SER) is being submitted to DEQ to monitor its effectiveness.

Prior to closing the SLF, an in-depth evaluation was performed to address collection needs in the southern half of the County. The evaluation resulted in the County building a new bi-level transfer station adjacent to the SLF to enable consolidation and transport of the waste materials generated in the southern portions of the County to the NLF. Transfer operations were subsequently adjusted to haul all waste previously disposed at the SLF to the NLF. The MSW baler building located at the NLF has continued to be a successful approach for the handling and managing recyclable materials.

The County's solid waste collection and recycling efforts were dramatically transformed from a former group of open-top 'green boxes' to a more effective network of public drop-off and convenience centers which support not just collection and transfer but also recycling. This transformation change has resulted in the County meeting and exceeding recycling goals while simplifying disposal operations via consolidation to a single facility. This has allowed a much better management approach for determining future capacity needs.

The solid waste permit for the NLF facility was issued on February 22, 1985 for Cell 1, The permit was amended May 8, 1996 for the 10.38-acre Cell 2 expansion. A 2.5 acre piggy back liner over the east slope of Cell 1 was incorporated into the Cell 2 design with an amendment issued December 17, 2002. Currently an approximate 22.41-acre foot print comprising Cells 1, 2, and 6A exists at the site. The original Cell 1 comprises approximately 7.85 acres of disposal footprint and is provided with a non-Subtitle D compliant 30-mil PVC liner and a leachate collection and removal system. Cell 1 is completely closed. Cell 2 directly abuts the east side of Cell 1 and overlays the non-Subtitle D conforming Cell 1 area via a "piggyback" liner system. Installation of the Cell 2 liner over the Cell 1 piggy back liner system completed the final closure of Cell 1. The Cell 2 liner system comprises approximately 10.38 acres with a Subtitle D compliant liner and leachate collection system. The total in place volume of Cells 1 and 2 is approximately 1,086,104 cu.yds. Part of Cell 2 was closed using a patented three component system including a structured geomembrane covered by engineered turf with a specialized sand infill known as "Closure Turf". Cell 6A comprises approximately 4.18 acres of disposal footprint with Subtitle D compliant liner system and was closed in 2023. Leachate pre-treatment and disposal is via existing on-site biological/aerated lagoons in combination with spray irrigation system. These lagoons are located along

the east property boundary within the waste management unit boundary and operate under a DEQ Virginia Pollution Abatement Permit (VPA01079). The limits of the spray irrigation system are located outside of the waste management unit boundary. This system combined with pump and haul for off-site disposal provide for all of the facility's leachate disposal requirements.

Changes made in solid waste management made during the 2013-2018 planning period have proven to be an effective strategy for continuing use during the 2024-2029 planning period.

The proposed NLF Western Expansion design permit request for "Solid Waste Facility Permit Number 461" during the last planning period was approved on December 20, 2020. This permit modification incorporates the proposed Westward Expansion consisting of a 66.8-acre parcel of land abutting the existing landfill to the west, which was purchased by Accomack County. The Part A Approval for this new property was granted on July 26, 2019. The remaining permitted capacity proposed for Cells 3 through 6B will be transferred from the existing facility to this new parcel. This re-configuration of the existing capacity will prolong the useful life of associated facility infrastructure used for waste management and recycling. The previous southern expansion consisted of Cells 3 through 6 which included approximately 30.3 acres of disposal footprint (21.1-acres of baseliner plus 9.2- acres of piggyback liner over Cells 1 and 2.). The estimated volume of this expansion was 2, 122, 226 cubic yards.

Cell 6A, (which consists of 4.18-acres of base liner and 5.38-acres of piggy back liner over Cell 1) of the southern expansion was closed in 2023 and Cell 7 of the

western expansion has been constructed and is now the only cell in operation at the NLF.

The westward expansion consists of Cells 7-11, and provides 23.4-acres of disposal footprint (20.88-acres of base liner plus 2.52-acres of piggyback liner over Cell 1) with an estimated volume of 2,304,111 cubic yards. Cells 3-6B, which constitute the remaining southern expansion has been withdrawn from the permit until such time the Accomack County can demonstrate the existing capacity is less than 20 years. At that time, the County could provide a revised "demonstration of need," and modified Part A and B applications to allow an expansion to bring Cells 3 through 6B back into the permit.

Changes to the groundwater monitoring well network to improve the network's ability to detect a release from the landfill, revises the groundwater monitoring network to monitor the existing landfill and the western expansion area, and incorporates an updated Groundwater Monitoring Plan.

Permit Limits: The total capacity of the expansion area is approximately 2,250,552 cubic yards with an estimate operating life span of approximately 27.2 years, as provided in Table 10 based on the "Northern Landfill Volume and Site Life Calculations" September 10, 2023 report found in **Appendix C**. This landfill life calculation is based on the daily disposal (average waste acceptance rate) of 134.6 tons/day, operating 312 days/year with an estimated in-place waste density of 0.51 tons/cubic yard. A maximum daily disposal limit of 250 tons can be accommodated based on the design, infrastructure, equipment, and staffing maintained by this facility.

Table 9 – Waste Placement Efficiency for Cell 7

Annualized air space used	Annualized Waste Received	Efficiency Factor	Efficiency Factor (lbs./cy)
82,725	42,004	51%	1,016

Based on data from "Northern Landfill Volume and Site Life Calculations" September 10, 2023 - Appendix B

In 2023 total airspace was reevaluated based on more complete design drawings and the calculated airspace associated with the expansion to be 2,250,552 cy. Using actual disposal data (42,004 tons) and surveyed airspace usage (82,725 cy), the site life for the recent expansion is 27.2 years as shown in **Table 10**.

Table 10 – Site Life Calculations

Cell Number	Remaining Air Space (cy)	Foot Print (ac)	Life Expectancy (years)
7	460,596	23.4	5.6
8	447,218		5.4
9	446,098		5.4
10	448,420		5.4
11	448,220		5.4
Totals	2,250,552		27.2

Based on data from "Northern Landfill Volume and Site Life Calculations" September 10, 2023 – Appendix B

C.4.b. Solid Waste Collection, Storage, Treatment, Transportation and Disposal

Current methods for handling solid waste within Accomack County and incorporated towns consist primarily of the collection of solid waste by various public and/or private haulers, transfer of waste materials from the southern end of the County via STS (located next to the former SLF), and disposal at the Accomack County NLF. The County also maintains a current network of 7 public drop-off and convenience centers to facilitate collection and recycling along with a fleet of roll-off trucks and containers to facilitate continuous collection. These manned convenience centers have a roll-off

compactor system for solid waste and for recyclable materials. The network of convenience and recycling centers is shown on **Figure 2**.

The incorporated towns of Melfa, Tangier, Parksley and Wachapreague provide their own waste collection with Town forces, while the remaining towns in Accomack County contract curb-side solid waste collection with a private hauler. Waste from the Town of Tangier is brought to the County's Harborton Loading/Off-Loading Facility by a private barge operation and unloaded there before being transported to the NLF for disposal. Collected waste materials are hauled to either the STS for consolidation to reduce vehicle trips or directly to the NLF.

No further significant changes are anticipated in the way the towns within Accomack County or the County collects solid waste. Each Town will need to periodically review its solid waste collection program to maintain efficiency and incorporate needed changes.

C.4.c. Special Waste Handling

Special wastes include asbestos, PCB containing materials, liquids, tires, drums, white goods, waste water treatment sludge, petroleum contaminated soils, household hazardous waste, antifreeze, used oil, batteries, and more recently, electronic waste (e-waste) such as computers and cellular telephones. Asbestos, PCB-contaminated materials, and petroleum contaminated soil are not accepted at the NLF or STS (except for household waste containing potentially limited quantities of these materials). Non-hazardous free liquids must be absorbed onto other materials before being disposed of in the landfill and drums must be cleaned, opened on at least one end and crushed before being placed in the fill. Household hazardous waste received commingled with other household waste may be disposed of in the general fill. White goods, used oil and batteries are accepted at both landfills and are recycled. Tires are accepted at the NLF and the STS and can be sent off-site for recycling. Small quantities of waste water treatment sludge are accepted at the Accomack County NLF and incorporated into the fill. The landfill also accepts limited amounts of industrial waste from area industries, such as agricultural plastics from farms and packaging waste from Perdue Farms and

Tyson Farms. The County also provides weekly household hazardous and electronic recycling collection.

C.5. Milestones, Funding and Program Execution Responsibilities

Implementation of the integrated solid waste management plan will require the efficient use of available resources within the County and its incorporated towns. Detailed implementation schedules and program funding plans have been developed and put in place for successful implementation of the Plan.

C.5.a. Schedule

Accomack County has established a Community Solid Waste Committee consisting of two members from the County Board of Supervisors and at least three members of the community. The committee meets quarterly with the Public Works Solid Waste Management Team to review activities and successful implementation of the SWMP. Throughout the minimum 20-year planning period, periodic evaluation of the plan and its programs is reviewed to ensure that milestone dates are successfully met and available resources are efficiently and effectively utilized. In addition, solid waste management planning continues to be reviewed for changes in technologies, local conditions, and state and federal requirements that can be incorporated into plan amendments appropriate. A schedule of solid waste activities during the minimum 20-year planning period is presented in **Table 11**.

Table 11 – Solid Waste Management Activity Schedule	
Activity	Year
Permit “Western” Expansion at Northern Landfill	2023
Construct New Northern Landfill Cell 7	2023
Open Northern Landfill Cell 7	2023
Close Northern Landfill Cell 6A	2023
Update SWMP	2023
Construct New Northern Landfill Cell 8	2028
Open Northern Landfill Cell 8	2028
Close Northern Landfill Cell 7	2028
Update SWMP	2028
Construct New Northern Landfill Cell 9	2033
Update SWMP	2033
Open Northern Landfill Cell 9	2034
Close Northern Landfill Cell 8	2034
Construct New Northern Landfill Cell 10	2038
Update SWMP	2038
Open Northern Landfill Cell 10	2039
Close Northern Landfill Cell 9	2039
Update SWMP	2043
Construct New Northern Landfill Cell 11	2044
Open Northern Landfill Cell 11	2044
Close Northern Landfill Cell 10	2045
Update SWMP	2048
Close Northern Landfill Cell 11	2050

C.5.b. Program Funding

Funding of the various solid waste management programs must play an important role in the planning process to ensure that the waste management strategy adopted is affordable by the planning area.

Changes in solid waste management needs within the County are expected, and updates to keep this Solid Waste Management Plan current should be conducted. To provide for updates of this SWMP, the County should consider making specific appropriations for that purpose.

The County's recycling programs will involve capital costs for periodic maintenance and/or replacement of collection containers as well as costs associated with collection and transport of the recyclables to market. Most localities (especially rural areas) recognize that recycling programs frequently do not pay for themselves and therefore recycling revenues must be supplemented with government funding for the program to be successful. The goal of most recycling programs is to break even or minimize the funding required to operate.

Funding for waste collection in Accomack County will need to cover costs associated with maintenance and operations of convenience centers. Funding will be via general fund.

Continued development of the NLF will require permitting, design and construction of new disposal cells, as well as incremental closure of completed areas. It is anticipated that new cell construction and progressive phased closure will be financed incrementally via borrowing capital monies and paid back over a 3 to 5-year period during the lifespan of any given disposal cell.

Funding for waste collection, vehicle maintenance and litter control is derived from the County's General Fund.

The incorporated Towns of Melfa, Tangier, Parksley and Wachapreague provide their own waste collection with Town forces, while the remaining towns in Accomack County contract curbside solid waste collection with a private hauler. Waste from the Town of Tangier (including MSW ash, CDD, metals, etc.) is brought to the County's Harborton Loading/Off-Loading Facility by a private barge operation and unloaded there before being transported to the NLF for disposal. Funding for these collection efforts is typically provided via the respective town's general fund, user fees or combination thereof. Collected waste materials are hauled to either the STS for consolidation to reduce vehicle trips or directly to the Northern Landfill.

The enactment of local ordinances is used throughout the planning period to support on-going achievement of the recycling rates mandated by the VDEQ, to set user fees and to successfully implement this Plan. At present, no additional ordinances are necessary for implementation of this Plan.

Waste disposal (landfill operations, monitoring, closure, etc.) is accounted for through an enterprise fund supported by tipping fees for waste disposal at the NLF. (Tipping fees are currently waived for the towns of Melfa, Tangier, Parksley and Wachapreague, which provide their own collection efforts).

C.6. Solid Waste Program Descriptions

Accomack County and its incorporated towns will undertake the strategies and programs described and defined in this SWMP to meet Virginia Solid Waste Planning and Recycling Regulation (VSWPRR) 9 VAC20-130-120 Planning Requirements. These strategies and programs, when undertaken as proposed, will constitute the integrated solid waste management strategy for Accomack County and the incorporated towns within the County.

C.6.a. Reduction

The following strategies will be undertaken to improve local source reduction efforts. These strategies focus on increased promotion of source reduction and interaction with local industry. Accomack County will support appropriate state and federal legislation promoting or requiring source reduction. Accomack County can encourage source reduction measures by considering the following:

- Setting tipping fees for solid waste disposal at the actual cost of solid waste management operations
- Assisting local industries to make capital investments necessary to reduce waste generated by current production processes through consideration of reductions in the local machine and tools taxes
- Working with local industry to develop source reduction strategies
- Assisting local businesses in joining regional waste exchanges
- Examining current inventory management and operating practices to identify ways that waste generation can be reduced within the local government operations

- Purchasing recycled paper
- Avoiding disposable products
- Promoting backyard composting of yard and/or food waste
- Encouraging office paper reduction (double sided printing, electronic file storage)
- Purchasing goods in bulk quantities to minimize packaging

The public information and education program encourages source reduction in the manner described above.

C.6.b. Reuse

The strategies identified below are to be considered to improve reuse of waste materials in Accomack County. These strategies will require efforts within County government, business and among County residents.

- Utilizing state and federal surplus when possible
- Reusing packing materials and pallets
- Utilizing auctions for the sale of surplus property rather than disposing of the surpluses in the landfill
- Considering equipment and supply purchases in terms of multiple uses and useable life rather than just initial purchase price
- Donating textiles (Good Will stores, for example)
- Donating computers and other goods
- Reuse of waste water sludge as a soil amendment at the landfills
- Encouraging businesses to use waste exchanges
- Promoting workplace waste reuse incentive programs for employees

To encourage reuse, the public information officer will implement a public information and public education plan within the County that will encourage local residents and businesses to implement these reuse strategies.

C. 6.c. Recycling

The County's current network of 7 public drop-off and convenience centers facilitates recycling with continuous collection which helps maintain recycling rates above the state mandatory 15 percent recycling rate for planning units with a population density rate of less than 100 persons per square mile based on the most recent United States Census.

Accurate weight records will continue to be maintained to document the amount of recyclable materials received at the centers. The centers will be evaluated on an annual basis to determine their effectiveness and the need for adjustments in the type and number of recyclable containers.

C.6.d. Resource Recovery

Resource recovery (waste to energy) typically refers to post-collection facilities that produce a burnable product or incinerate solid waste to generate energy. Resource recovery involves a much more substantial capital outlay with extensive facility development costs, personnel costs and operating expenses. Commitment to resource recovery requires a commitment to:

- Existing technology
- An existing facility which must be amortized over a lengthy time period regardless of its productivity
- Uncertainties over the future regulatory controls on the facility and its by-products
- A difficult siting problem, which is further complicated by the continued need for a landfill facility for ash generated by the facility and bypass waste
- Operation by highly skilled technical staff

C.6.e. Incineration

A small quantity of ash materials is received annually for disposal from the Town of Tangier (waste incinerator ash accounting for about 99 percent of the total volume received) and the Eastern Shore Regional Animal Shelter.

Based upon a review of available data, it does not appear that Accomack County generates significant quantities of ash from incineration requiring any special disposal processes.

C.6.f. Storage

Accomack County has no long term MSW storage facilities. The NLF, STS and the 7 public drop-off and convenience centers are used as temporary holding areas for recycling and reuse materials until picked up by contracted vendors for further processing.

C.6.g. Treatment

Accomack County has no special MSW treatment processes or facilities. Any special waste listed in the above paragraph C.4.c and medical waste are handled on a case-by-case bases.

C.6.h. Disposal

The SLF was closed by December 31, 2012 pursuant to compliance with the Closure Prioritization Schedule established by the VDEQ for HB1205 landfills. All legal disposal of solid waste by Accomack County and its incorporated towns occurs at the Accomack County NLF. The facility operates 8.5 hours per day (7.5 hours open to the public), 6 days a week, with a daily operating staff of 3-5 people.

The Accomack County Department of Public Works serves as the central archive for maintaining records of all known disposal sites and the amount of solid waste

generated in the planning area. **Figure 3** is a map showing all the known historical County disposal sites. The County will submit records to the VDEQ of all new disposal sites and quantities of solid waste generated in the planning area.

C.6.i. Litter Control

Existing litter control programs will continue to be implemented by each individual locality. Through public education and information efforts, citizens will be encouraged to use the solid waste collection and disposal services provided by the county. In particular, citizens are made aware of the weight- based fee exclusion in the County Solid Waste Management Ordinance which states that *"Persons disposing of solid waste in sanitary landfill facilities, the weight of which does not exceed 200 pounds, will not be charged."* In addition, the County could consider a bulky waste collection program through which citizens can contact their local government for collection of these items on an appointment basis.

The county also partners with community organizations such as Waste Watchers to help remove litter from county roadsides and land sites.

During the last planning period the county procured a vacuum truck for litter pick-up and is currently going through the process to put a dedicated team in place for manning it.

C.7. Outreach Programs

C.7.a. Waste Exchange

The county encourages the reuse by finding a secondary use for a product in the home or business. This contributes to recycling of those materials. Rather than throwing the product in the trash it can be used as a substitute for other consumer items, delaying its entry into the waste stream. The public information officer encourages reuse of products and materials prior to disposal. He also continually looks for markets and partners with the county for recycling of the products and materials collected at our

landfills and convenience centers as a way convert them into other products. Some examples of how these products and materials can be marketed to consumers and businesses are:

- Locating clothing and shoe donation collection boxes at our convenience centers for reuse by charities and the textile industry
- Industrial repair and reuse of wood pallets or to use the wood for other products
- Collection at designated convenience centers for computers and other electronic goods for recycling of precious metals for reuse in new products
- Reuse of waste water sludge as a soil amendment at the landfills

C.7.b. Public Education

Public information and education is provided to residents via the Litter Control and Recycling program coordinator, supported via the VDEQ sponsored Litter Control and Recycling Grants Program on an annual basis. This money is used by the County to support litter prevention and recycling programs and for coordination and funding support of litter pickup programs. Moreover, the program provides a platform for addressing broader solid waste management goals associated with recycling and sound waste management practices.

To effectively and successfully implement an integrated strategy for solid waste management, both public information and education continues to play an important role. The ongoing duties of the public information officer is to:

- Promote the waste management strategy adopted by Accomack County and its incorporated towns
- Educate citizens and businesses within the planning area regarding the waste management strategy through workshops with industries, public school programs, etc.
- Relay concerns and/or potential changes regarding the waste management strategy, which are identified by citizens or businesses of the County to the Board of Supervisors

- Assist businesses with recycling programs and associated reporting

C.7.c. Public Participation

The county encourages community members to be involved in management and reduction of solid waste by partnering with businesses and organizations for recycling, material reuse and litter control.

The County has also established a Community Solid Waste Committee to support the Waste Management team by reviewing activities and help with the successful implementation of this SWMP.

In accordance with 9VAC20-130-130, the County is providing the public an opportunity to comment on this revision to the Plan. The County published a notice and then held a public hearing on the Plan on February 21, 2024. The Board of Supervisors Plan adoption is in **Appendix A** and any public comments received are recorded in the meeting minutes and in **Appendix E**.

C.8. Evaluation Procedures for Solid Waste Collection

This SWMP describes the processes, procedures and the data to be collected in the appropriate sections for each activity that will be used to evaluate execution of this plan.

The county Solid Waste Management Team and the supporting Community Solid Waste Committee will continually review Accomack County's Solid Waste System, including litter control and recycling activities, look at both short- and long-term problems and plans, and make comprehensive recommendations back to the Board of Supervisors as appropriate to help facilitate resources and actions necessary to ensure successful plan execution.

C.9. Solid Waste Management Current and Projected Needs and Action Plan

This SWMP is the basis for the solid waste management strategy for Accomack County and its incorporated towns. The Accomack County Board of Supervisors has adopted this SWMP by formal resolution and a copy is found in **Appendix A** and it will be updated as necessary to meet the plan goals and objectives. A thorough review of the SWMP and its implementation will be conducted at least quarterly or more often if required to ensure the continued success of the solid waste Management Program.

The Northern Landfill is the only open municipal landfill on the Eastern Shore of Virginia and there are no other economical disposal options that will serve the needs of County residents and businesses. It is therefore critical to ensure the County's ability to provide solid waste disposal services well into the future.

D. Solid Waste Management Documentation Process

The Accomack County Department of Public Works serves as the central archive for maintaining records of all known disposal sites and the amount of solid waste generated in the planning area. **Figure 3** is a map showing all the known historical County disposal sites. The County will submit records to the VDEQ of all new disposal sites and quantities of solid waste generated in the planning area.

E. Solid Waste Monitoring Data Recording and Reporting Methodology

The Accomack County Department of Public Works collects data continuously on all activities and the collection of MSW and recyclables to and from the NLF, STS and the convenience centers. Monthly and annual reports are also generated and maintained

at the Public Works Department. Copies are submitted to VDEQ as required by regulations.

F. Solid Waste Management Plan Adoption Resolution

Accomack County Board of Supervisors has adopted this SWMP by formal resolution. A copy of the County Board of Supervisors plan adoption is in **Appendix A** of this plan.

G. Regional Solid Waste Management Planning

Accomack County is a stand-alone planning unit and is not part of a Regional Planning Unit.

H. Plan Goals and Actions to be taken if not Met

Amendments to this SWMP are classified as major and minor pursuant to VSWMR found in 9 VAC20 130-175, briefly summarized hereafter. Major amendments shall include:

- Any addition, deletion, or cessation of operation of any solid waste disposal facility;
- Any increase in landfill capacity;
- Any change that moves toward implementation of a waste management strategy that is lower in the waste management hierarchy;
- Action plan(s), including an action plan to address a planning unit' recycling rate that has fallen below the statutory minimum; or
- Any change to membership in the approved area.

Major amendments shall require the same public participation as detailed in 9VAC20-130-130 prior to submittal to the Department for approval and implementation.

Minor amendments shall include:

- Any addition, deletion, or cessation of operation of any facility that is not a solid waste disposal facility;
- Any change that moves toward implementation of a waste management strategy that is higher in the waste management hierarchy; or
- Any non-substantive administrative change such as a change in name.

Accomack County may petition the VDEQ for a variance or exemption to any of the requirements in the Solid Waste Management Planning Regulations. The petition must include: *"A description of need and justification for the proposed action, including impacts from existing operations and market conditions (if, based on the evidence submitted in a petition, the director determines that market conditions within a county, city, town or region make unreasonable the mandatory recycling rates..., and that the market conditions are beyond the control of the county, city, town or region, a variance from those rates may be issued)"*

REFERENCES

- Accomack County Annual Recycling Rate Reports
- Northern Landfill Volume and Site Life Calculations" September 10, 2023
- Northern Landfill Western Expansion Permit Number 461 Approval Letter
- Virginia Employment Commission (VEC) 2018 & 2023 Annual Reports
- Code of Virginia § 10.1-1411 "Regional and local solid waste management plans"
- Virginia Solid Waste Planning and Recycling Regulation 9VAC20-130-120 "Planning Requirements"
- Virginia Solid Waste Planning and Recycling Regulation 9VAC20-130-30 "Policy" regulation
- 2020 United States Census data

FIGURES

Figure 1
Solid Waste Facilities

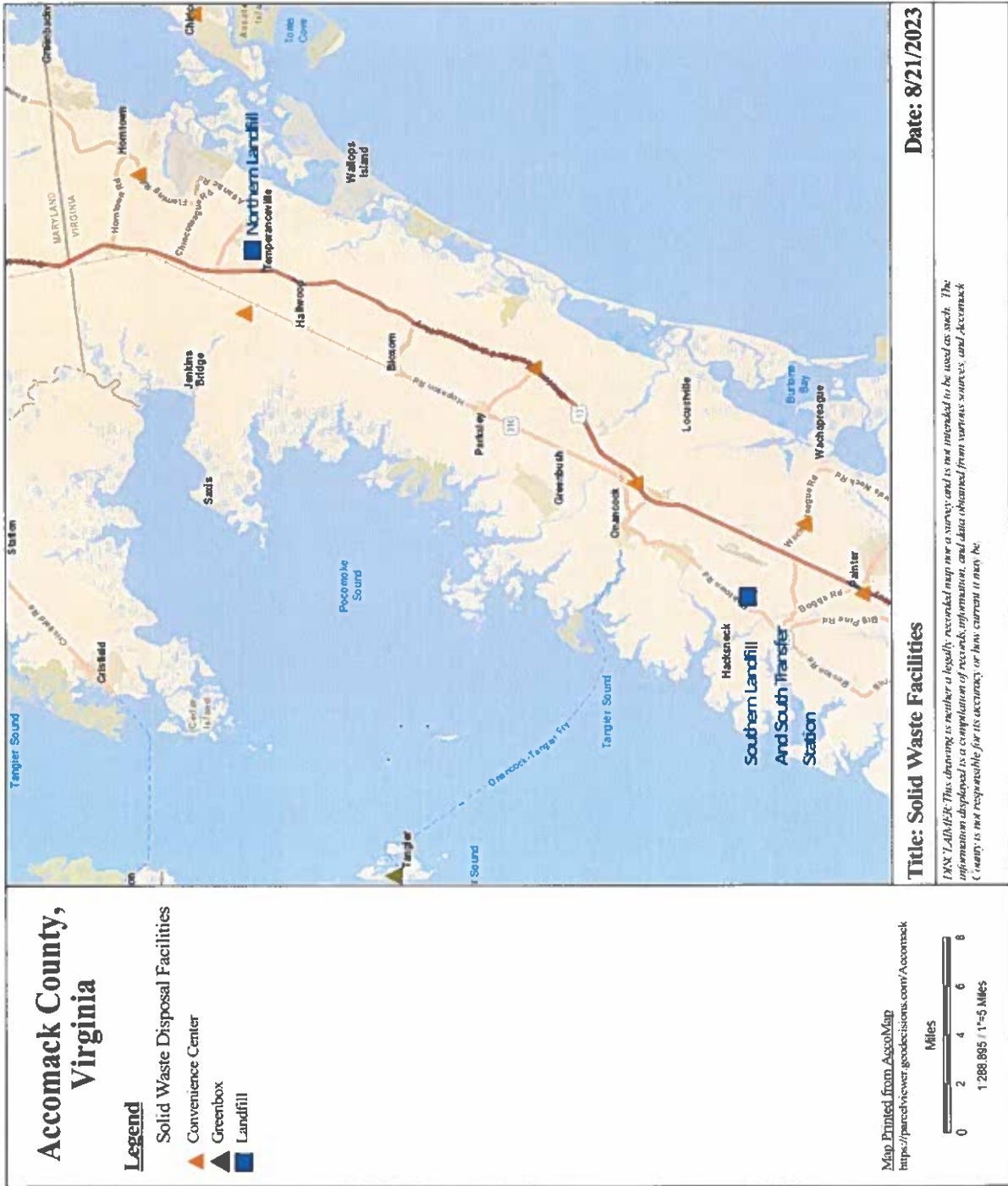


Figure 2
Northern Landfill Southern Expansion

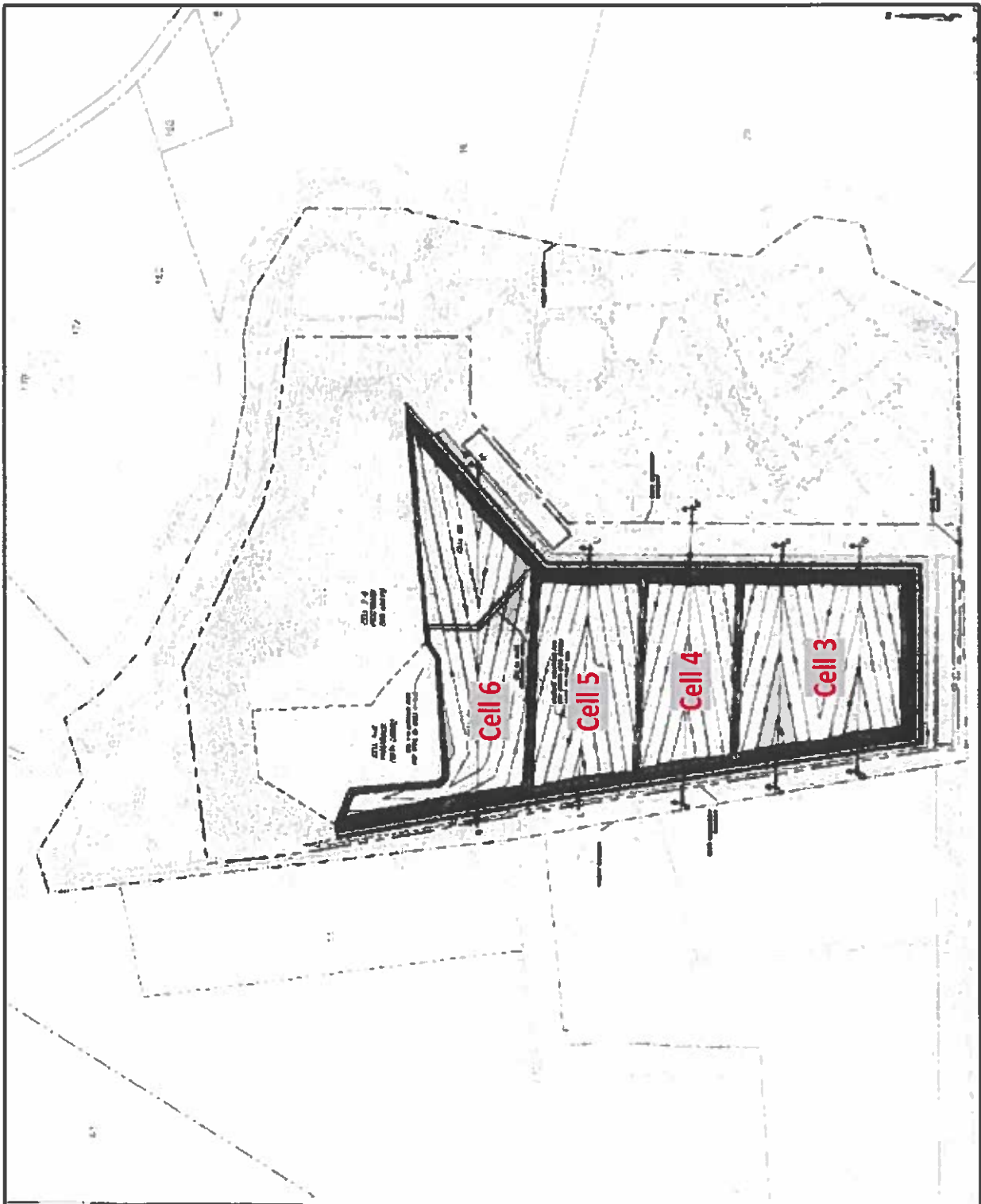
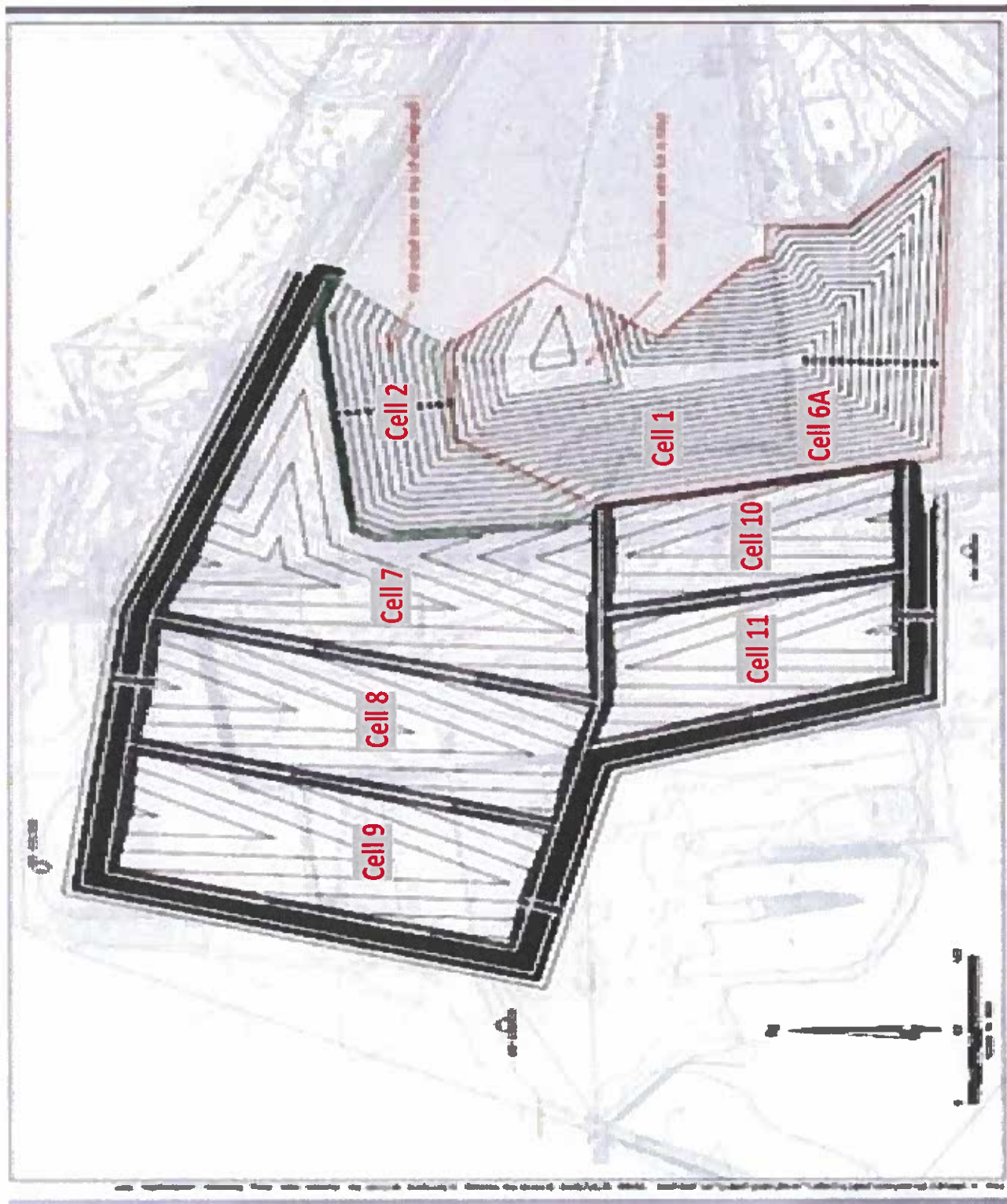


Figure 3
Northern Landfill Western Expansion



APPENDIXES

Appendix A

Accomack County 2024 Solid Waste Management Plan Adopting Resolution (Pending)

* Attached

Appendix B

Accomack County Annual Recycling Reports



Commonwealth of Virginia
Locality Recycling Rate Report
 DEQ Form 50-30 (Revised September 2018)

Date Submitted

Calendar Year

CY2022

Solid Waste Planning Unit

Click on the adjacent cell for drop down menu

Accomack County

SWPU Web Page

<https://www.co.accomack.va.us>

Contact 1

Name	Trystan Wagner
Title	Recycling and Litter Control Specialist
Address Line 1	24401 Joynes Neck Road
Address Line 2	P.O. Box 476
Address Line 3	Accomac, Va 23301
Phone Number	757-787-1468
Email address	twagner@co.accomack.va.us
Total Population for SWPU	33,000
Mandated Recycling Rate (% will auto calculate)	15%
Sources for PRM Data <i>Example: Permit #112, County Landfill</i>	Permit #464 NLF Permit #091 STS
Other Sources for collected data <i>Example: Walmart/Target</i>	
Comments:	3rd full year no glass, should be by EOY 23

Contact 2

	Greg Duncan
	Deputy Director of Solid Waste
	24401 Joynes Neck Road
	P.O. Box 476
	Accomac, Va 23301
	757-787-1468
	gduncan@co.accomack.va.us
SWPU Population Density	74
Reporting Frequency (Will auto calculate)	Every 4 years

Enter tons (whole numbers only) in the yellow highlighted boxes for PRMs and MSW
Totals will auto calculate.

Principal Recyclable Materials (PRM)	
PRM Material	Tons recycled
Paper	
Metal	791
Plastic	166
Glass	0
Commingled	1,195
Yard Waste	2,807
Waste Wood	2,396
Textiles	101
Waste Tires	639
Used Oil	33
Used Oil Filters	0
Used Antifreeze	
Batteries	11
Electronics	2
Inoperative Motor Vehicles	0
Other Total (Specify Material and tonnage on Rows 24 - 39 to the right.)	0
Total PRM in Tons	8,140 8,141

MSW Disposed	
Household Waste	15,401
Commercial Waste	10,503
Institutional Waste	3,435
Other	
Total MSW	29,339

Enter facility information and material in columns A and B. Enter tons (whole numb

Credits Recycling Residue Facility/Operation	Material

/ Disposed.

Specify Other PRMs for Row 39	
PRM Material	Tons recycled
100 metal	
60 agriculture plastic	
All CC R, 180, 185, 195	
70 yard waste, 150 soil cover	
260 woodchip, 520,521 mulch	
Monthly report	
Auston out/billing	
7.4lbs/gallon crystal clean	
200 wet cell, call2 recycle	
east coast dismantling	
Other Total	0

Credit for Source Reduction Program	
10 residential waste	SRP does not apply enter "0". SRP does apply enter "2"
20 commercial waste	
50 industrial waste	2%

ers only) in the yellow highlighted boxes. Totals will auto calculate.

Tons

Total	

Credits Solid Waste Reused

Reuse Method	Material
Put and take area at 7 recycling centers	wood/metal/plastics/paper/cardboard/glass
residents may leave used items (furniture, toys, books, household items) for reuse by others	
Total	

Credits Non-MSW recycled

Recycling Method	Material
crushed and used for drive ways, access roads	concrete, brick
Total	
CREDITS TOTAL	

Recycling rates auto calculate.

Base Recycling Rate	21.7%
Adjusted Recycling Rate	22.4%
Adjusted Recycling Rate + SRP	24.4%
Credit Max Allowed Base +5	26.7%
Final Recycle Rate	24.4%

0

Tons

319	250lbs per site per day
319	

Tons

24	40 rubble
24	
343	



Commonwealth of Virginia
 Locality Recycling Rate Report
 DEQ Form 50-30 (Revised September 2018)

Date Submitted

Calendar Year

CY2021

Solid Waste Planning Unit

Click on the adjacent cell for drop down menu

Accomack County

SWPU Web Page

<https://www.co.accomack.va.us>

Contact 1

Name	Trystan Wagner
Title	Recycling and Litter Control Specialist
Address Line 1	24401 Joynes Neck Road
Address Line 2	P.O. Box 476
Address Line 3	Accomack, Va 23301
Phone Number	757-787-1468
Email address	twagner@co.accomack.va.us
Total Population for SWPU	33,413
Mandated Recycling Rate (% will auto calculate)	15%
Sources for PRM Data <i>Example: Permit #112, County Landfill</i>	Permit #464 NLF Permit #091 STS
Other Sources for collected data <i>Example: Walmart/Target</i>	
Comments:	2nd full year no glass

Contact 2

	Greg Duncan
	Deputy Director of Solid Waste
	24401 Joynes Neck Road
	P.O. Box 476
	Accomac, Va 23301
	757-787-1468
	gduncan@co.accomack.va.us
SWPU Population Density	74
Reporting Frequency (Will auto calculate)	Every 4 years

Enter tons (whole numbers only) in the yellow highlighted boxes for PRMs and MSW
Totals will auto calculate.

Principal Recyclable Materials (PRM)	
PRM Material	Tons recycled
Paper	
Metal	780
Plastic	423
Glass	0
Commingled	1,177
Yard Waste	3,416
Waste Wood	1,288
Textiles	121
Waste Tires	520
Used Oil	22
Used Oil Filters	0
Used Antifreeze	
Batteries	12
Electronics	2
Inoperative Motor Vehicles	0
Other Total (Specify Material and tonnage on Rows 24 - 39 to the right.)	0
Total PRM in Tons	7,761

MSW Disposed	
Household Waste	16,222
Commercial Waste	11,694
Institutional Waste	3,068
Other	
Total MSW	30,984

Enter facility information and material in columns A and B. Enter tons (whole numb

Credits Recycling Residue	
Facility/Operation	Material

Total	

Credits Solid Waste Reused

Reuse Method	Material
Put and take area at 7 recycling centers	wood/metal/plastics/paper/cardboard
residents may leave used items (furniture, toys, books, household items) for reuse by others	
Total	

Credits Non-MSW recycled

Recycling Method	Material
crushed and used for drive ways, access roads	concrete/brick
Total	
CREDITS TOTAL	

Recycling rates auto calculate.

Base Recycling Rate	20.0%
Adjusted Recycling Rate	20.7%
Adjusted Recycling Rate + SRP	22.7%
Credit Max Allowed Base +5	25.0%
Final Recycle Rate	22.7%



Commonwealth of Virginia
Locality Recycling Rate Report
 DEQ Form 50-30 (Revised September 2018)

Date Submitted June 1, 2021

Calendar Year CY2020

Solid Waste Planning Unit Accomack County
 Click on the adjacent cell for drop down menu

SWPU Web Page <https://www.co.accomack.va.us>

Contact 1

Name	Linda Mrozinski
Title	Recycling/Litter Control Specialist
Address Line 1	24401 Joynes Neck Road
Address Line 2	P.O. Box 476
Address Line 3	Accomack, VA 23301
Phone Number	757-787-1468
Email address	lmrozinski@co.accomack.va.us
Total Population for SWPU	33,000
Mandated Recycling Rate (% will auto calculate)	15%
Sources for PRM Data <i>Example: Permit #112, County Landfill</i>	Permit # 464 NLF Permit# 091 STS
Other Sources for collected data <i>Example: Walmart/Target</i>	TFC Recycling, NASA, NOAHH, ES Community College, Family Dollar, US Coast Guard, Dollar General
Comments:	1st Full year NO Glass

Contact 2

	Greg Duncan
	Deputy Director of Solid Waste
	24401 Joynes Neck Road
	P.O. Box 476
	Accomac, VA 23301
	757-787-1468
	gduncan@co.accomack.va.us
SWPU Population Density	74
Reporting Frequency (Will auto calculate)	Every 4 years

Enter tons (whole numbers only) in the yellow highlighted boxes for PRMs and MSW
Totals will auto calculate.

Principal Recyclable Materials (PRM)	
PRM Material	Tons recycled
Paper	3,856
Metal	3,801
Plastic	602
Glass	0
Commingled	5,084
Yard Waste	2,057
Waste Wood	1,894
Textiles	1,528
Waste Tires	2,744
Used Oil	120
Used Oil Filters	0
Used Antifreeze	105
Batteries	94
Electronics	10
Inoperative Motor Vehicles	0
Other Total (Specify Material and tonnage on Rows 24 - 39 to the right.)	
Total PRM in Tons	21,895

MSW Disposed	
Household Waste	30,719
Commercial Waste	5,723
Institutional Waste	2,545
Other	
Total MSW	38,987

Enter facility information and material in columns A and B. Enter tons (whole numb

Credits Recycling Residue	
Facility/Operation	Material

Total	

Credits Solid Waste Reused

Reuse Method	Material
Put and Take Area at 7 recycling centers i.e.	Wood Metal/plastics/Paper/Cardboard
Residents may leave gently used Items (furniture, toys, books, Household items) for reuse by others.	
Total	

Credits Non-MSW recycled

Recycling Method	Material
Crushed and used for drive ways, access roads	Concrete
Total	
CREDITS TOTAL	

Recycling rates auto calculate.

Base Recycling Rate	36.0%
Adjusted Recycling Rate	38.2%
Adjusted Recycling Rate + SRP	40.2%
Credit Max Allowed Base +5	41.0%
Final Recycle Rate	40.2%

0

Tons

1,161
1,161

Tons

1,040
1,040
2,201



Commonwealth of Virginia
Locality Recycling Rate Report
 DEQ Form 50-30 (Revised September 2018)

Date Submitted January 23, 2020

Calendar Year 2018-2019

Solid Waste Planning Unit **Accomack County**
 Click on the adjacent cell for drop down menu

SWPU Web Page

Contact 1

Name	Linda Mrozinski
Title	Recycling/Litter Control Specialist
Address Line 1	24401 Joynes Neck Road
Address Line 2	P.O. Box 476
Address Line 3	Accomac, VA 23301
Phone Number	757-787-1468
Email address	Lmrozinski@co.accomack.va.us
Total Population for SWPU	33,000
Mandated Recycling Rate (% will auto calculate)	15%
Sources for PRM Data <i>Example: Permit #112, County Landfill</i>	Permit Number 464 North Landfill Permit Number 091 South Transfer Station
Other Sources for collected data <i>Example: Walmart/Target</i>	TFC Recycling, Davis Disposal, NASA, NOAHH, US Coat Guard, Verizon, Perdue, Family Dollar, Dollar General
Comments:	

Contact 2

	Greg Duncan
	Deputy Director Solid Waste
	24401 Joynes Neck Road
	P.O. Box 476
	Accomac, VA 23301
	757-787-1468
	Gduncan@co.accomack.va.us
SWPU Population Density	84
Reporting Frequency (Will auto calculate)	Every 4 years

Enter tons (whole numbers only) in the yellow highlighted boxes for PRMs and MSW
 Totals will auto calculate.

Principal Recyclable Materials (PRM)	
PRM Material	Tons recycled
Paper	
Metal	
Plastic	
Glass	
Commingled	20,847
Yard Waste	
Waste Wood	
Textiles	105
Waste Tires	5,727
Used Oil	5,677
Used Oil Filters	
Used Antifreeze	452
Batteries	297
Electronics	272
Inoperative Motor Vehicles	
Other Total (Specify Material and tonnage on Rows 24 - 39 to the right.)	
Total PRM in Tons	33,377

MSW Disposed	
Household Waste	28,145
Commercial Waste	5,755
Institutional Waste	2,436
Other	
Total MSW	36,336

Enter facility information and material in columns A and B. Enter tons (whole numb

Credits Recycling Residue	
Facility/Operation	Material

Total	

Credits Solid Waste Reused

Reuse Method	Material
Total	

Credits Non-MSW recycled

Recycling Method	Material
Total	
CREDITS TOTAL	

Recycling rates auto calculate.

Base Recycling Rate	47.9%
Adjusted Recycling Rate	47.9%
Adjusted Recycling Rate + SRP	49.9%
Credit Max Allowed Base +5	52.9%
Final Recycle Rate	49.9%



**Commonwealth of Virginia
Locality Recycling Rate Report
Calendar Year 2017**

DEQ Form 50-30 (Revised September 2017)

Date Submitted **4/23/18**

Email completed form to:
virginia.butler@deq.virginia.gov

Solid Waste Planning Unit **Accomack County**

Click on the adjacent cell for drop down menu

SWPU Web Page

Contact 1

Contact 2

Name	Linda Mrozinski		Greg Duncan	
Title	Recycling/Litter Control Specialist		Deputy Director Public Works	
Address Line 1	24401 Joynes Neck Road		24401 Joynes Neck Road	
Address Line 2	P.O. Box 476		P.O. Box 476	
Address Line 3	Accomack, VA 23301		Accomack, VA	
Phone Number	757-787-1468		757-787-1468	
Email address	lmrozinski@co.accomack.va.us		gduncan@co.accomack.va.us	
Total Population for SWPU	33,165	SWPU Population Density	84	
Mandated Recycling Rate (% will auto calculate)	15%	Reporting Frequency (Will auto calculate)	Every 4 years	
Sources for PRM Data <i>Example: Permit #112, County Landfill</i>	Permit #464 County North Landfill Permit #091 South Transfer Station			
Other Sources for collected data <i>Example: Walmart/Target</i>	TFC Recycling, Davis Disposal, NASA, US Coast Guard, Verizon, Dollar General, Family Dollar, Hill Sand & Gravel Construction Recycling.			
Comments:				

Enter tons (whole numbers only) in the yellow highlighted boxes for PRMs and MSW Disposed.
Totals will auto calculate.

Principal Recyclable Materials (PRM)

PRM Material	Tons recycled
Paper	3,443
Metal	2,013
Plastic	1,245
Glass	2,146
Commingled	8,359
Yard Waste	2,125
Waste Wood	3,017
Textiles	1,863
Waste Tires	1,908
Used Oil	4,075
Used Oil Filters	0
Used Antifreeze	0
Batteries	3,009
Electronics	445
Inoperative Motor Vehicles	0
Other Total (Specify Material and tonnage on Rows 24 - 39 to the right)	6,972
Total PRM in Tons	40,620

Specify Other PRMs for Row 39

PRM Material	Tons recycled
Concrete, Brick, Block	4500
Mulch	2,472
Other Total	6,972

MSW Disposed

Household Waste	28,145
Commercial Waste	5,755
Institutional Waste	2,436
Other	
Total MSW	36,336

Credit for Source Reduction Program

SRP does not apply enter "0" SRP does apply enter "2"
2%

Enter facility information and material in columns A and B. Enter tons (whole numbers only) in the yellow highlighted boxes. Totals will auto calculate.

Credits Recycling Residue

Facility/Operation	Material	Tons
Total		0

Credits Solid Waste Reused

Reuse Method	Material	Tons
Total		0

Credits Non-MSW recycled

Recycling Method	Material	Tons
Total		0
CREDITS TOTAL		0

Recycling rates auto calculate.

Base Recycling Rate	52.8%
Adjusted Recycling Rate	52.8%
Adjusted Recycling Rate + SRP	54.8%
Credit Max Allowed Base +5	57.8%
Final Recycle Rate	54.8%

Appendix C

Northern Landfill Volume and Site Life Calculations Report



September 10, 2023

Mr. Greg Duncan, Sr.
Deputy Director of Solid Waste
County of Accomack
24420 Lankford Highway
P. O. Box 52
Tasley, Virginia 23441

**Re: Northern Landfill Volume and Site Life Calculations
Accomack County, Virginia
CHA Project No. 34873.2021**

Dear Greg:

Accomack County retained CHA Consulting Inc. (CHA) to perform the following evaluations relative to the Northern Landfill and proposed Western Expansion.

- Perform a topographic survey to determine volume of waste placed in Cell 7 since the cell became active on September 12, 2022. A stamped survey has been provided by TRC based on an aerial image taken on May 5, 2023.
- Estimate the site life for Cell 7 based on the permitted cell capacity.
- Estimate site life for each cell in the proposed Western Expansion.
- Prepare schedules to anticipate time frames for design, bidding, and construction of each cell in the proposed Western Expansion considering the remaining life of Cell 7.

Waste Received Annually

The County has provided data on the tonnage of waste received at the Northern Landfill from September 12, 2022, through May 5, 2023. The data is shown in Table 1 below.

Table 1

Date Range	Waste Received (tons)	No. of operating Days	Avg. Daily Value (tons/day)
9/12/22 to 5/5/23	27,195	202	134.6

**Excludes Sundays, Thanksgiving and Christmas*

The annualized (312 operating days) quantity of waste currently being received based on the data shown in Table 1 is 42,004.2 tons.

Volume Used/Volume Remaining

The volume used in Cell 7 during the period between the cell opening on September 12, 2022, and the current topographic survey date of May 5, 2023 is 53,559 cubic yards. This volume was determined by direct comparison of the as-built construction survey grades for Cell 7 (Figure 1) (from the drawing completed by George E. Young, III, P.C. dated July 7, 2022) and the current waste survey grades for Cell 7 (Figure 2) (from the drawing completed by TRC dated May 5, 2023). The annualized (312 operating days) volume of airspace used based on landfill operations and waste received during this period is 82,725 cy.

The remaining volume in Cell 7 was calculated by subtracting the waste placed in Cell 7 through May 5, 2023, from the permitted capacity of Cell 7 (514,155 CY). The final waste grades for which the permitted capacity is based on are shown on Figure 3. The calculated remaining volume available for filling in Cell 7 going forward is 460,596 cubic yards.

The annualized value for cell volume usage reported above was used to calculate life expectancy for Cell 7 and each of the cells of the proposed Western Expansion. The remaining airspace volumes for Cell 8 through 11 of the proposed expansion are the total cell capacities that were determined from final cell waste grades developed for preparation of the Western Expansion Part B Permit Application. The calculated life expectancy of the landfill cells is shown in Table 2 below.

Table 2

Cell	Volume (CY)	Life Expectancy (Years)
Cell 7	460,596	5.6
Cell 8	447,218	5.4
Cell 9	446,098	5.4
Cell 10	448,420	5.4
Cell 11	448,220	5.4
Total	2,250,552	27.2

It is important to note that beyond Cell 7, design and construction of the cells in the Western Expansion remains to be completed. Therefore, there may be some variation in the information presented in Table 2 as design and construction progresses. Also note that the values presented in Table 2 consider current landfill operations and achieved waste efficiency factor. Changes in these conditions will affect life expectancies.

Waste Efficiency Factor

The waste received (in tons) divided by the total volume of space used creates a “waste efficiency factor”. Typically, the goal is to achieve a waste efficiency factor of at least 55% or 1,100 lbs/cy. This factor does account for daily cover soil.



The data shown in Table 3 below shows that the County is achieving a waste efficiency factor of 51% or 1,016 lbs/cy. These values fall below the typical goal for waste compaction efficiency. The efficiency factor may likely be below the target goal because the initial lifts of waste placed directly on the cell liner were thicker than typical lifts, were composed of "soft" waste, and were placed using less compaction to protect the cell liner system.

Table 3

Waste Received (Tons)	Air Space (Cub Yd)	Efficiency Factor	Efficiency Factor (lbs/cy)
27,195	53,559	51%	1,016

Waste Placement Evaluation

We have prepared two cross sections in Figure 4 that show the 9/12/22 and 5/5/23 landfill surfaces and the proposed final waste surface on the western and southern sides of Cell 7. The locations of these sections are shown in Figure 3. These sections show that the County appears to be creating and maintaining slopes at a ratio close to (and less than) 3 Horizontal (H) to 1 Vertical (V). Note that the County could consider filling at a slightly steeper slope to a maximum of 3H : 1V, as there will likely be some waste consolidation over time.

Cell Design and Construction Schedule

For planning purposes, CHA has provided an approximate schedule of when additional cells in the Western Expansion Area need to be constructed and closed. CHA has used the approximate site life estimates shown in Table 2 above to prepare Table 4.

Table 4

Cell #	Estimated Latest Date to Start Design	Estimated Latest Date to Start Construction	Estimated Required Ready to Open Date	Estimated Date for Closure
Cell 7	-	-	-	Dec 2028
Cell 8	Sep 2027	Apr 2028	Oct 2028	May 2034
Cell 9	Sep 2032	Apr 2033	Mar 2034	Sep 2039
Cell 10	Sep 2037	Apr 2038	Jul 2039	Feb 2045
Cell 11	Sep 2043	Apr 2044	Dec 2044	Jul 2050

In each case, we have projected that a new cell would need to be constructed and ready to receive waste approximately 2 months before the preceding cell reaches capacity. We also assumed that construction of that cell would need to start 6 months before the cell was intended to open and final design of that cell would need to start 8 months before the start of construction. If the general timeframes described above resulted in construction starting too late in any given year, the schedule was manually adjusted so that construction would always start in the spring.



Historical Operations Summary

Table 5 is provided for tracking of historical landfill operations and comparison of various parameters from different operations periods, which are approximately year to year. This summary will also provide snapshots of how the anticipated closure date of Cell 7 is affected by the waste stream and waste efficiency factor (waste compaction). Table 5 will be more meaningful as successive waste surveys are performed for Cell 7.

Table 5

Operational Period	Waste Survey Report Date	Annualized Air Space Used ⁽¹⁾ (cy)	Annualized Waste Received ⁽¹⁾ (tons)	Waste Efficiency Factor ⁽²⁾	Remaining Cell 7 Life ⁽³⁾ (years)	Anticipated Closure Date ⁽³⁾
9/12/22 to 5/5/23	8/10/23	82.725	42,004	51%	5.6	Dec 2028

⁽¹⁾ Annualized Air Space Used and Waste Received are reported for ease of comparison of these parameters from different operational periods.

⁽²⁾ Waste Efficiency Factor, Remaining Cell Life and Anticipated Closure Date were determined using data from the actual Operational Periods.

⁽³⁾ Remaining Cell Life and Anticipated Closure Date were determined with reference to Operational Period end date (topographic survey date).

The schedules shown in Table 4 should be reviewed continually, as changes in tonnage of waste received, changes in compaction rates, and settlement of the landfill waste mass will affect cell life. Additionally, cell life estimates are calculated maximum values based on final waste grading plan designs, and actual waste placement at the landfill may result in lower achievable cell capacities. Subsequently, the anticipated cell closure and required ready-to-open dates may occur sooner than shown.

We trust this information will be helpful to the County. Please contact me if there are any questions regarding the information included herein.

Sincerely,



Sandy Warner.C.P.G
Environmental Team Leader

/dmf

Attachments

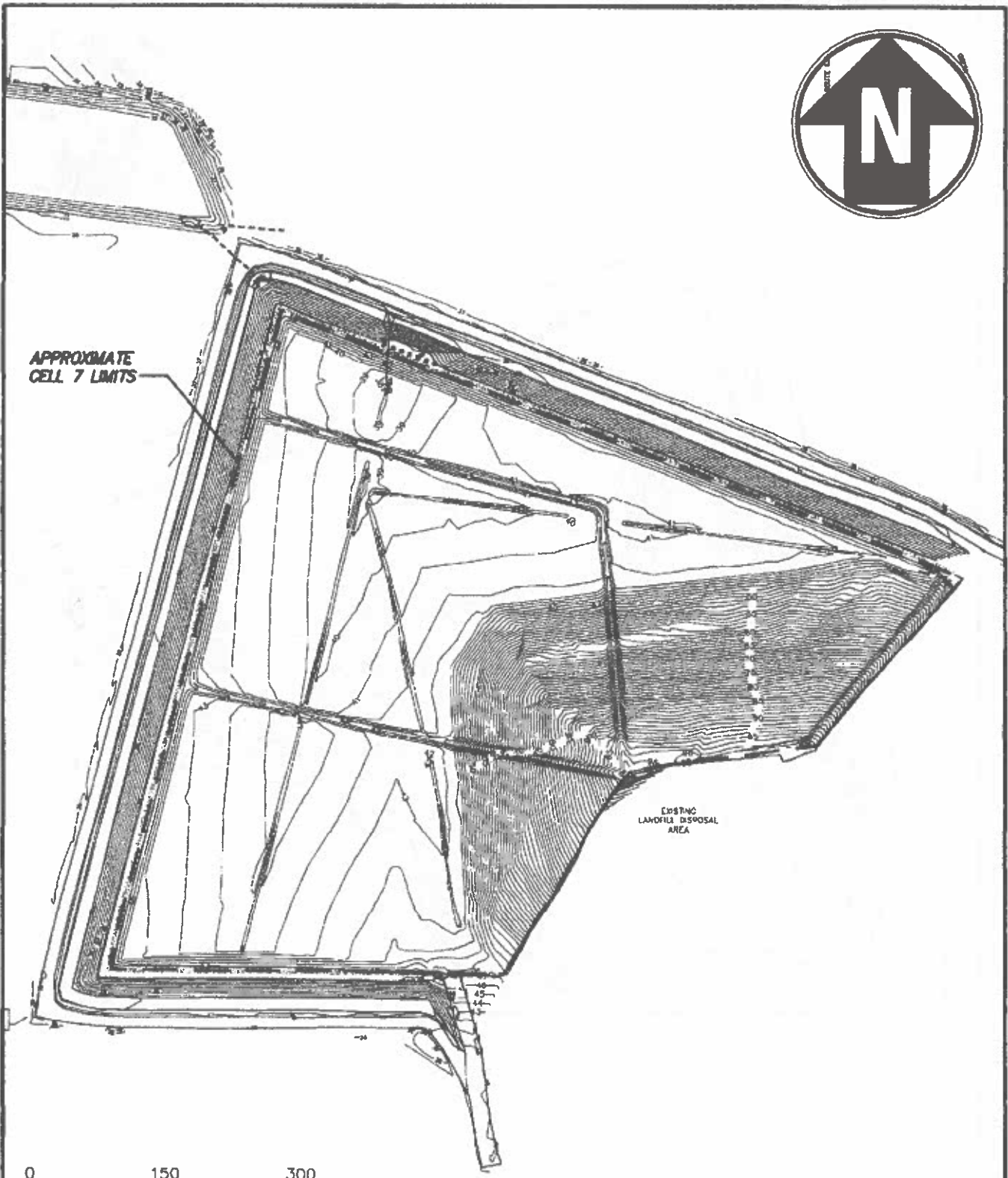
cc: S. Hall, Public Works Director
D. Foley, CHA

V:\Projects\ANY\K4\34873\23-02\08_Reports\Site Life Report.doc

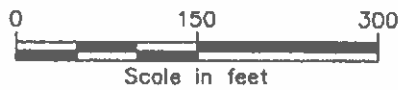




APPROXIMATE
CELL 7 LIMITS



EXISTING
LANDFILL DISPOSAL
AREA



Scale in feet

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Richmond, VA 23235-4700
804.887.5544 • www.chacompanies.com

CELL 7 TOPOGRAPHIC SURVEY
JULY 7, 2022

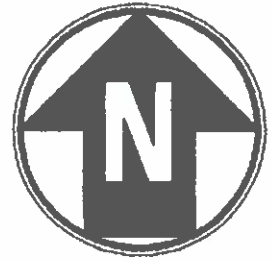
ACCOMACK COUNTY NORTHERN LANDFILL
ATLANTIC, VIRGINIA

PROJECT NO.
34873

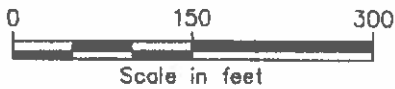
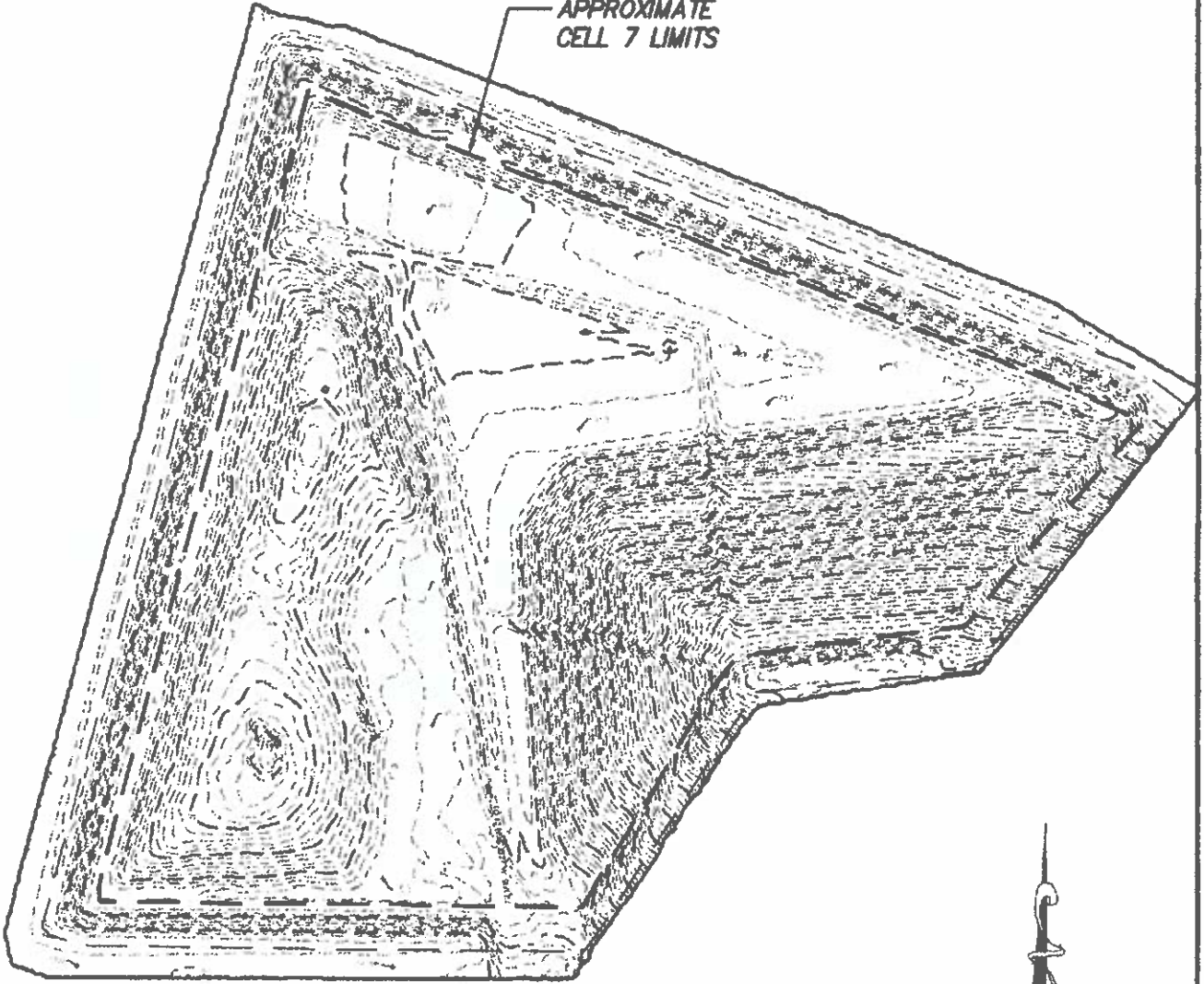
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FIGURE 1

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APPROXIMATE
CELL 7 LIMITS



Scale in feet

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Richmond, VA 23235-4700
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CELL 7 TOPOGRAPHIC SURVEY
MAY 5, 2023

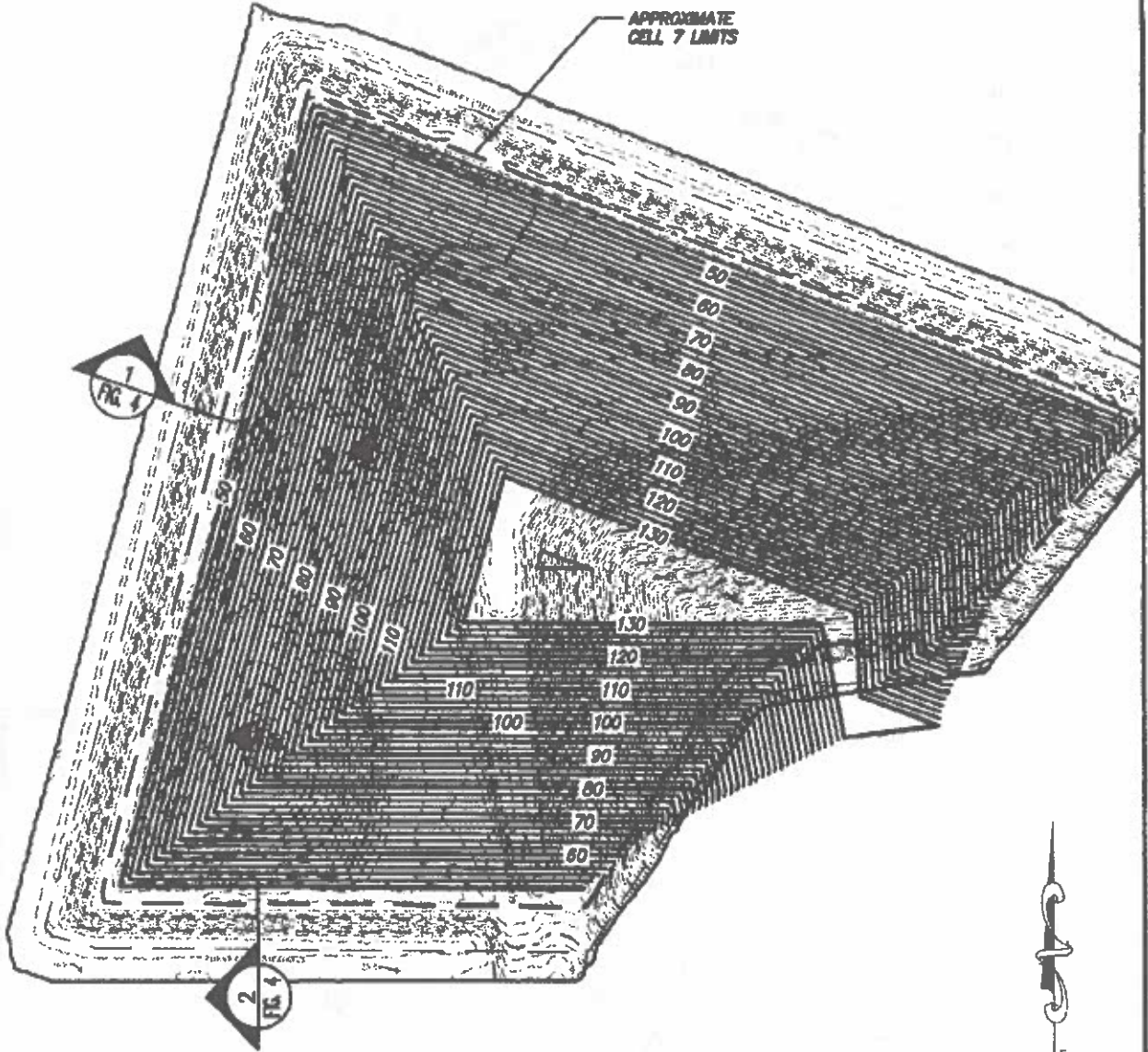
ACCOMACK COUNTY NORTHERN LANDFILL
ATLANTIC, VIRGINIA

PROJECT NO.
34873

DATE: 08/2023

FIGURE 2

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 N 3648083.00
 E 12530070.00
 FC 10.00



File: V:\PROJECTS\ANY\K\34873\23-02\08_DESIGN\DRAWINGS\01_SHEETS\34873_23-02\08_DESIGN\DRAWINGS\01_SHEETS\34873_FIGURE 3.DWG
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 Richmond, VA 23228-4700
 804.887.3364 • www.chacorporates.com

CELL 7 FINAL WASTE GRADES

**ACCOMACK COUNTY NORTHERN LANDFILL
 ATLANTIC, VIRGINIA**

PROJECT NO.
 34873

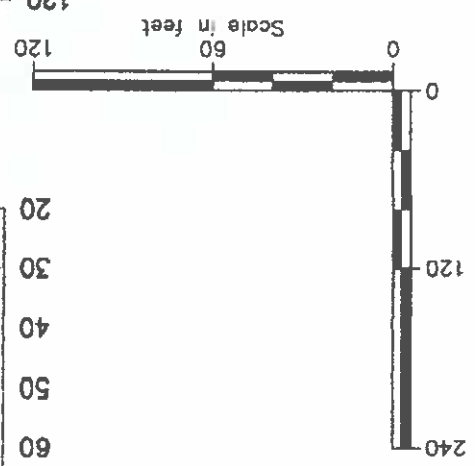
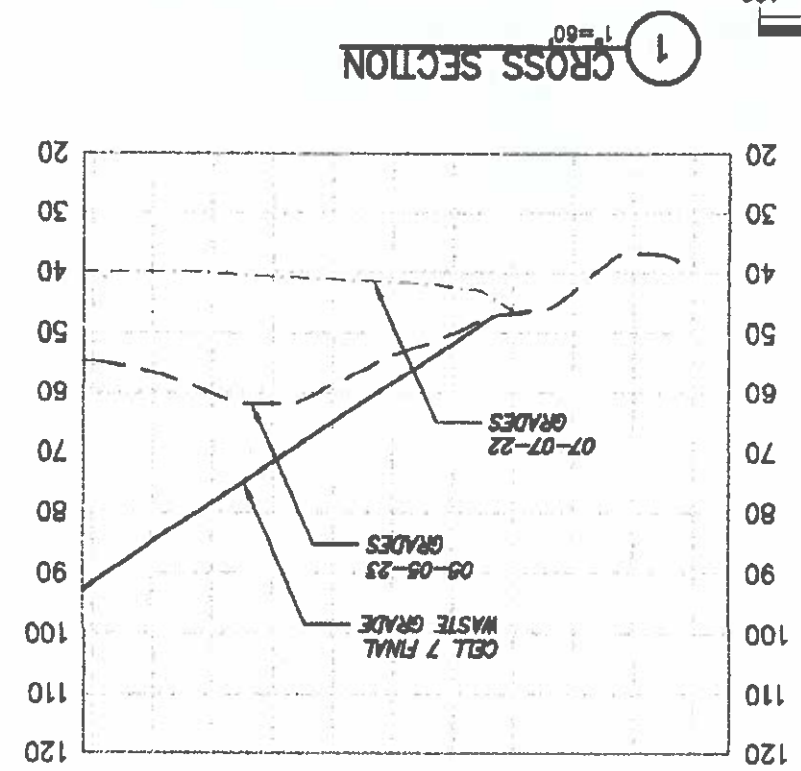
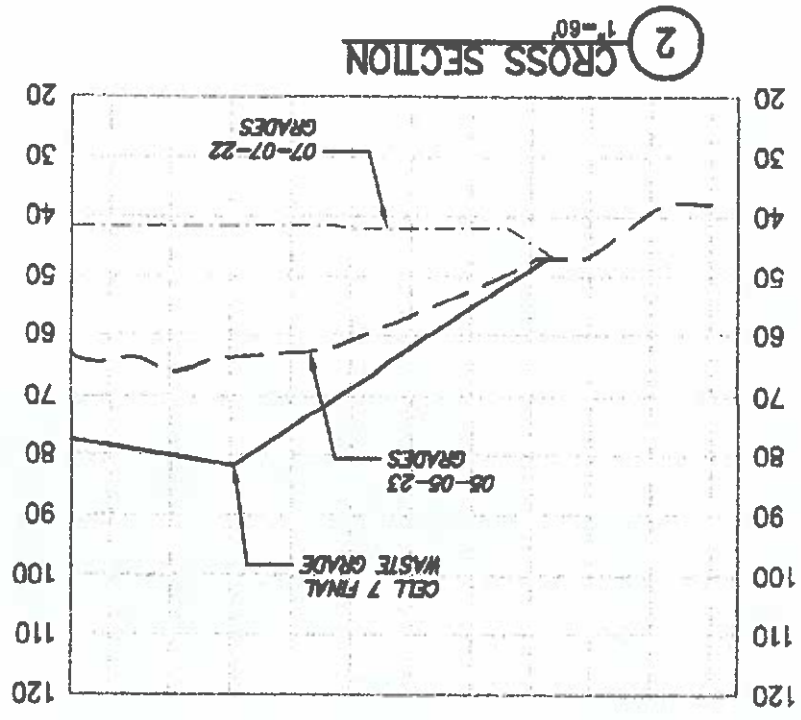
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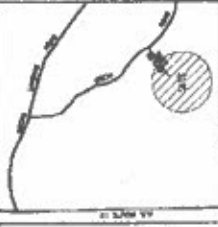
FIGURE 3



CELL 7 WASTE PLACEMENT
 CROSS SECTIONS
 ACCOMACK COUNTY NORTHERN LANDFILL
 ATLANTIC, VIRGINIA

PROJECT NO. 34873
 DATE: 08/2023
 FIGURE 4





**CELL 7 FINAL SITE PLAN
FOR
NORTH ACCOMACK LANDFILL**
NORTH ACCOMACK TOWNSHIP
ACCOMACK COUNTY, VIRGINIA

LEGEND

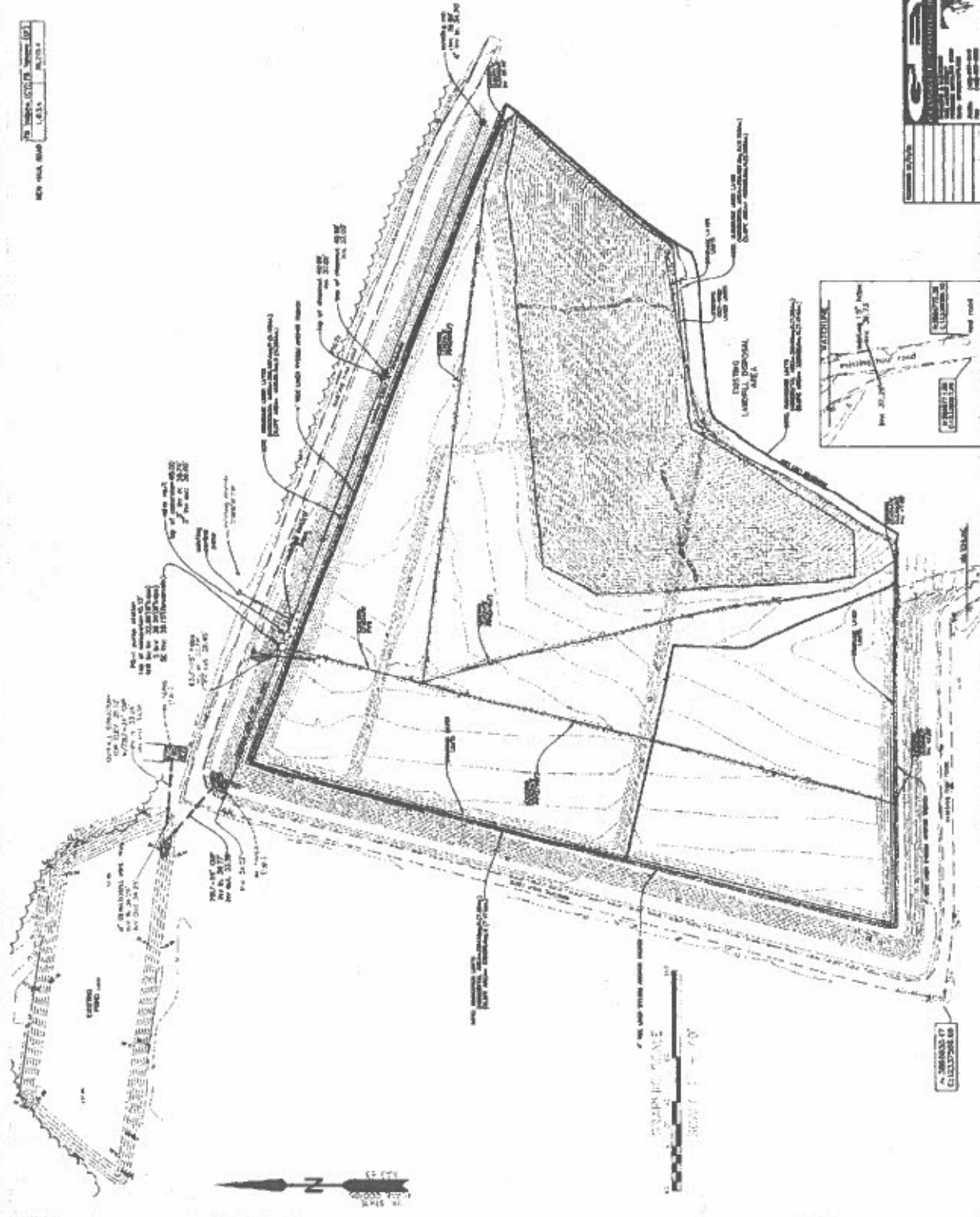
- - EXIST. MANHOLE
- - EXIST. SHUT-OFF/WATER METER
- - FUTURE MANHOLE RELEASE VALVE

UNAPPROVED CONTRACT
I, JAMES W. HARRIS, ENGINEER, LICENSE NO. 10000, STATE OF VIRGINIA, HEREBY CERTIFY THAT THE INFORMATION CONTAINED ON THIS PLAN WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER IN THE STATE OF VIRGINIA.

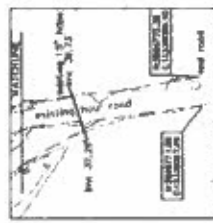
Prepared by: J. W. Harris
Date: 11/15/00

PROJECT NUMBER: V21000-A
DATE: 11/15/00
SCALE: 1" = 1' 1"

75' NORTH-SOUTH PROPERTY LINE
100' EAST-WEST PROPERTY LINE



J. W. HARRIS ENGINEERING, INC.
10000
11/15/00



DATE: 11/15/00

Appendix D

Northern Landfill Western Expansion Permit # 461 Approval Letter



Commonwealth of Virginia
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 FAX (804)-698-4178
www.dceq.virginia.gov

Matthew J. Strickler David K. Paylor
Secretary of Natural Resources Director
(804) 698-4000

Craig R. Nicol
Regional Director

**SOLID WASTE FACILITY PERMIT
PERMIT NUMBER 461**

Facility Name: Accomack County Northern Sanitary Landfill

Facility Type: Sanitary Landfill

Latitude: N 37° 54' 20"

Site Location: Accomack County

Longitude: W 75° 31' 45"

Location Description: The facility is located in Temperanceville on an approximate 215.7-acre parcel of land owned by Accomack County east of U.S. Route 13, on State Route 703. The facility boundary is approximately 142.3 acres and the waste management unit boundary is approximately 60.5 acres.

Background: The facility is a publicly owned and operated sanitary landfill that primarily serves Accomack County with some small quantities periodically received from nearby Northampton County pursuant to the County's Solid Waste Master Plan. The wastes accepted include those wastes identified in the Design Report, Permit Attachment VI, and Permit Module II, Operations.

The solid waste permit for the facility was issued on February 22, 1985 for Cell 1. The permit was amended May 8, 1996 for the 10.38-acre Cell 2 expansion. A 2.5 acre piggyback liner over the east slope of Cell 1 was incorporated into the Cell 2 design with an amendment issued December 17, 2002. Currently an approximate 22.41-acre footprint comprising Cells 1, 2, and 6A exists at the site. The original Cell 1 comprises approximately 7.85 acres of disposal footprint and is provided with a non-Subtitle D compliant 30-mil PVC liner and a leachate collection and removal system. Cell 1 is completely closed. Cell 2 directly abuts the east side of Cell 1 and overlays the non-Subtitle D conforming Cell 1 area via a "piggyback" liner system. Installation of the Cell 2 liner over the Cell 1 piggyback liner system completed the final closure of Cell 1. The Cell 2 liner system comprises approximately 10.38 acres with a Subtitle D compliant liner and leachate collection system. The total in place volume of Cells 1 and 2 is approximately 1,086,104 cu. yds. Part of Cell 2 was closed using a patented three component

system including a structured geomembrane covered by engineered turf with a specialized sand infill known as "Closure Turf." Cell 6A comprises approximately 4.18 acres of disposal footprint with Subtitle D compliant liner system and is currently active.

Leachate pre-treatment and disposal is via existing on-site biological/aerated lagoons in combination with spray-back irrigation system. These lagoons are located along the east property boundary within the waste management unit boundary and operate under a DEQ Virginia Pollution Abatement Permit (VPA01079). The limits of the spray-back irrigation system are located outside of the waste management unit boundary. This system combined with pump and haul for off-site disposal provide for all of the facility's leachate disposal requirements.

Permit Modification: This permit modification incorporates the proposed Westward Expansion consisting of a 66.8-acre parcel of land abutting the existing landfill to the west, which was just recently purchased by Accomack County. The Part A Approval for this new property was granted on July 26, 2019. The remaining permitted capacity proposed for Cells 3 through 6B will be transferred from the existing facility to this new parcel. This re-configuration of the existing capacity will prolong the useful life of associated facility infrastructure used for waste management and recycling. The previous southern expansion consisted of Cells 3 through 6 which included approximately 30.3 acres of disposal footprint (21.1-acres of base liner plus 9.2-acres of piggyback liner over Cells 1 and 2.). The estimated volume of this expansion was 2,122,226 cubic yards. To date only Cell 6A, (which consists of 4.18-acres of base liner and 5.38-acres of piggyback liner over Cell 1) of the southern expansion has been constructed and is currently in operation.

The proposed westward expansion consists of Cells 7-11, and provides 23.4-acres of disposal footprint (20.88-acres of base liner plus 2.52-acres of piggyback liner over Cell 1) with an estimated volume of 2,304,111 cubic yards. Cells 3-6B, which constitute the remaining southern expansion are hereby withdrawn from the permit until such time the Accomack County can demonstrate the existing capacity is less than 20 years. At that time, the County shall provide a revised "demonstration of need," and modified Part A and B applications to allow an expansion to bring Cells 3 through 6B back into the permit. At that time, the existing Part B for Cells 3 through 6B will be re-evaluated to determine if there are changes to the Virginia Solid Waste Management Regulations (VSWMR, 9 VAC 20-81-10, *et seq.*) that are applicable and if changes to the plans and documents that have previously been submitted are required.

This permit modification also includes changes to the groundwater monitoring well network to improve the network's ability to detect a release from the landfill, revises the groundwater monitoring network to monitor the existing landfill and the western expansion area, and incorporates an updated Groundwater Monitoring Plan. All previous permit modifications are outlined in detail in Module I, Section I.G.

Permit Limits: The total capacity of the expansion area is approximately 2,304,111 cubic yards with an estimate operating life span of approximately 36.3 years, as provided in Table 1 of the Design Report, Part B Attachment VI. This landfill life is based on the daily disposal (average waste acceptance rate) of 124 tons/day, operating 312 days/year with an estimated in-place waste

density of 0.62 tons/cubic yard. A maximum daily disposal limit of 250 tons can be accommodated based on the design, infrastructure, equipment, and staffing maintained by this facility.

THIS IS TO CERTIFY THAT:

**Accomack County
P.O. Box 388
Accomack, VA 23301**

is hereby granted a permit to construct, operate, and maintain the facility as described in the attached Permit Modules I, II, III, X, XI, XII, and XIII and Permit Documents incorporated by reference. These Permit Modules and Permit Documents are as referenced hereinafter and are incorporated into and become a part of this permit.


The herein described activity is to be established, modified, constructed, installed, operated, used, maintained, and closed in accordance with the terms and conditions of this permit and the plans, specifications, and reports submitted and cited in the permit. The facility shall comply with all regulations of the Virginia Waste Management Board. In accordance with Chapter 14, § 10.1 - 1408.1(D) of the Code of Virginia, prior to issuing this permit, any comments by the local government and general public have been investigated and evaluated and it has been determined that the proposed expansion poses no substantial present or potential danger to human health or the environment. The permit contains such conditions and requirements as are deemed necessary to comply with the requirements of the Virginia Code, the regulations of the Board, and to prevent substantial or present danger to human health or the environment.

Failure to comply with the terms and conditions of this permit shall constitute grounds for the revocation or suspension of this permit and for the initiation of necessary enforcement actions.

The permit is issued in accordance with the provisions of 10.1-1408.1.A, Chapter 14, Title 10.1, Code of Virginia (1950) as amended.

Issued: February 22, 1985 (Cell 1)
First Amendment: May 8, 1996 (Cell 2 Expansion)
Second Amendment: December 21, 2001 () (Groundwater Minor Mod)
Third Amendment: December 17, 2002 (Cell 2/1 Piggyback)
Fourth Amendment: June 30, 2006 (Groundwater Protection Standards)
Fifth Amendment: June 17, 2009 (Groundwater Minor)
Sixth Amendment: January 27, 2017 (Southern Expansion)

APPROVED:


Regional Director

**Accomack North Sanitary Landfill
Solid Waste Permit 461**

**Major Modification
December 2020**

DATE: December 15, 2020
Modification # 7

**PERMIT MODULES
REFERENCE LIST**

**PERMIT MODULE I – GENERAL PERMIT CONDITIONS
PERMIT ATTACHMENT I-1, PREVIOUS PERMIT MODIFICATION APPROVAL LETTERS**

PERMIT MODULE II – CONDITIONS OF OPERATION

PERMIT MODULE III – SANITARY LANDFILL DESIGN

PERMIT MODULE X – DETECTION MONITORING

PERMIT MODULE XI – ASSESSMENT MONITORING

PERMIT MODULE XII – CLOSURE

PERMIT MODULE XIII – POST CLOSURE CARE

PERMIT DOCUMENTS

The documents listed below are hereby incorporated into this permit and the permittee is subject to all conditions contained therein. It is the responsibility of the permittee to properly maintain and update these documents. Any version with a revision date other than as listed below is not considered to be the official approved version and is subject to Department review and approval prior to being recognized as the "permitted" version.

1. Part B Application:
 - a. Design Plans (Accomack County Northern Landfill Western Expansion), prepared by CHA and dated October 1, 2019 and last revised March 11, 2020 (Attachment III).
 - b. Closure Plan, prepared by CHA, dated/last revised October 1, 2019 (Attachment IV).
 - c. Post-Closure Plan, prepared by ARCADIS and amended by CHA, dated October 2019 and last revised April 2020 (Attachment V).
 - d. Design Report, prepared by CHA, dated/last revised October 2019 (Attachment VI).
 - e. Construction Quality Assurance Plan and Technical Specifications, prepared by CHA, dated/last revised October 2019 (Attachment VII).
 - f. Leachate Management Plan, prepared by CHA, dated October 2019 and last revised April 2020 (Attachment VIII).
 - g. Landfill Gas Management Plan, prepared by CHA, dated October 2019 and last revised April 2020 (Attachment IX).
 - h. Groundwater Monitoring Plan, prepared by CHA, last revised July, 2020 (Attachment X).

The following documents have been submitted to satisfy permit or regulatory requirements; however, are considered reference documents and are not incorporated into Permit No. 461. This list may not be all-inclusive.

1. Document Titled "Part A Application for Accomack County Northern Landfill, prepared by SCS Engineers, and dated April 8, 1994.
2. Document titled, "Accomack County Northern Sanitary Landfill Westward Expansion, Part A Application, "dated August 30, 2018, and as revised April 29, 2019, prepared by CHA.
3. Construction Quality Assurance Report, Certification Report for construction of Cell 6A of the Accomack County Northern Landfill Expansion prepared on your behalf by CHA design/construction solutions dated December 2016.
4. Construction Quality Assurance Report, Cell 2 Expansion, prepared by SCS Engineers, dated July 21, 1997.

Appendix E

Public Hearing Comments (Pending)

* There were no comments at
the Public Hearing.

