



Nutrient Management Planning in Maryland

2024 Annual Report

Maryland Department of Agriculture

Prepared by: Dwight Dotterer

Pursuant to §8-807 of the Annotated Code of Maryland, the Maryland Department of Agriculture (MDA) is reporting on the coverage, implementation and evaluation of nutrient management plans being used on Maryland farms.

Background

The Water Quality Improvement Act of 1998 requires all farmers grossing \$2,500 a year or more or livestock producers with 8,000 pounds or more of live animal weight to run their operations using a nutrient management plan. Nutrient management plans help farmers manage fertilizers, animal waste, and other nutrient sources more efficiently in order to meet crop needs while protecting water quality in streams, rivers and Chesapeake Bay. Plans that address both nitrogen and phosphorus inputs are required for all agricultural operations which produce plants, food, feed, fiber, animals or other agricultural products.

Farmers are required to keep their nutrient management plans current, take new soil samples a minimum of once every three years and file annual reports with MDA describing how they implemented their nutrient management plans during the previous year.

Farmers who own or manage 10 or more acres of agricultural land and apply their own nutrients, are required to attend a two-hour MDA-sponsored education program on nutrient application once every three years. Professionals and farmers certified to prepare nutrient management plans are required to take continuing education courses in order to keep abreast of the latest nutrient management technologies and regulations.

Enforcement Activities

MDA strives to maintain a staff of ten agricultural nutrient management specialists to ensure that farmers are complying with the Nutrient Management Law and that environmental objectives are being met. In 2024 the Program was able to meet the goal of ten inspectors for part of the year when a new inspector position was added to the program, therefore, the number of on-farm reviews will increase in 2025.

The NM Program staff in 2024 also included two Urban Nutrient Management Specialists part of the year due to a retirement, who together conducted 161 reviews of licensed commercial fertilizer companies and public entities. One of the Urban Specialists splits his time evenly between urban reviews and conducting reviews of certified consultants. The Program has determined a critical need for consultant reviews and the Specialist completed 17 consultant reviews in 2024. The agricultural specialists review nutrient management plans submitted by farmers, analyze annual reports describing how farmers implemented their plans during the previous year, and perform on-farm inspections to make certain that plans are up-to-date and being followed properly. MDA is authorized to issue fines and penalties, take administrative actions, and pursue judicial actions, including civil and criminal proceedings. In the calendar year 2024, MDA issued \$38,825 in fines to 21 farmers. One operator was given the maximum fine of \$5,000 due to continued lack of cooperation and a repeat of the same violation.

Nutrient Management Plan Submissions

Maryland farmers are required by law to submit nutrient management plans to MDA that have been developed by an MDA certified consultant or farm operator who is trained and certified by MDA to develop a plan solely for his or her operation. As of December 2024, nutrient management plans have been submitted for 5,127 farm operations. This represents a total farm acreage of 1,224,461 acres required to be protected by these plans.

Annual Implementation Reports

Farmers are required to maintain an updated nutrient management plan at the farm level to reflect changes in their operation. Annual Implementation Reports (AIRs) are required to be filed with MDA by March 1 of each year describing how nutrients were used on their operations. Every year MDA issues warning letters to farmers who fail to file the required AIR by the March 1 deadline, followed by notification of pending fines. In the calendar year 2024, 5,127 farm operations (4638 regular AIRs, 489 CAFO AIRs) had submitted AIRs to MDA. A new fine structure adopted through legislation is intended as an incentive for operators to submit their AIRs promptly to avoid the financial penalty. The penalty also encourages those operators who may ignore the law, to submit the AIR. The previous fine of \$250 was thought to be too low to provide the incentive to comply with the law. Currently the fine structure provides for a graduated penalty structure, \$250 30 days after receiving a warning letter, \$500 30 days later, and not less than \$1,000 30 days later or 90 days after receiving the initial warning letter. MDA is currently proposing new legislation that would give authority to simply begin the penalty at \$1,000 to avoid the lengthy process leading up to the \$1,000 fine. One hundred one farmers remain out of compliance at the end of the calendar year, resulting in \$101,000 of pending fines. In December 2024, the 101 farm operators were in the process of being sent to the Central Collections Unit as part of the enforcement process.

In 2024, 235 regular operations and 21 CAFO operations were made inactive after contacting the farm operators to confirm they no longer farm or no longer meet the Nutrient Management requirements of income or animal numbers. There were also new operators added, and some were farm transfers, so the net loss of operators is much less. The received implementation reports cover 1,218,409 acres of land.

On-Farm Plan Implementation Reviews and Inspections

MDA conducted 817 plan implementation reviews and inspections in calendar year 2024 to verify that farmers' nutrient application records and receipts were in line with their nutrient management plans. The inspections included both on-farm and virtual inspections, but nearly all of the reviews were on-farm. The Program adopted a plan for virtual reviews in 2020 that continued throughout 2021, and a transition to virtual reviews has been successful, but slow to be accepted early on. During calendar year 2024, most reviews were in person as both the NM Specialists and the farm operators prefer in-person meetings. It is anticipated the Program will continue implementation reviews indefinitely using a mix of both virtual and in-person reviews. The Program reserved the right to return to the farm to inspect buffers and setbacks, and in-person meetings were required when responding to complaints. There are a surprising number of farm operations in Maryland that do not have access to computers, which continues to pose a

challenge as the Program moves toward electronic submission of the AIR through the OneStop portal. Therefore, the Specialists are prepared to assist in person operators who request assistance in completing the AIR. Approximately 74 percent of those inspected were fully in compliance, 22 percent were determined to be out of compliance due to having no plan, an expired plan or incomplete plan. 1 percent failed their inspections due to over application of nutrients and 3 percent failed due to inadequate records or nutrient application setback violations. MDA is working to bring these farmers into compliance. The compliance rate improved to 80% when violations were corrected by farmers within the given timeframe and re-inspected.

Production and Utilization of Animal Manures, Including Import and Export

The following information is provided to meet the new AIR reporting requirements outlined below. The data is provided in three attachments and was compiled using the most recent complete AIR data which is for the calendar year 2023.

Attachment 1- Manure Land Application in Maryland

Attachment 2- Manure Sent to Alternative Use / Manure Broker / Other Farm Operation

Attachment 3- Manure Exported Out of State

Attachment 1

2023- Manure Application in Maryland

County	Manure Type	On Farm Collected Manure				Imported Manure				Total Land Application of Manure			
		Tons	Acres	Gallons	Acres	Tons	Acres	Gallons	Acres	Tons	Acres	Gallons	Acres
Allegany	Beef	1,661.8	538.7	0.0	0.0	0.0	0.0	0.0	0.0	1,661.8	538.7	0.0	0.0
	Horse	186.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	186.0	0.8	0.0	0.0
	Sheep	21.0	20.0	0.0	0.0	20.0	117.7	0.0	0.0	41.0	137.7	0.0	0.0
Anne Arundel	Beef	254.4	81.6	0.0	0.0	0.0	0.0	0.0	0.0	254.4	81.6	0.0	0.0
	Horse	1,066.0	299.3	0.0	0.0	0.5	0.6	0.0	0.0	1,066.5	299.9	0.0	0.0
	Poultry	1.5	1.0	0.0	0.0	1,344.0	384.0	0.0	0.0	1,345.5	385.0	0.0	0.0
	Sheep	2.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	20.0	0.0	0.0
Baltimore/Baltimore City	Beef	4,685.7	548.2	0.0	0.0	56.0	6.6	0.0	0.0	4,741.7	554.8	0.0	0.0
	Dairy	3,789.7	372.4	2,293,545.0	416.9	486.0	66.6	115,500.0	23.1	4,275.7	438.0	2,409,045.0	440.0
	Horse	1,953.2	588.3	0.0	0.0	32.0	8.0	0.0	0.0	1,985.2	596.3	0.0	0.0
	Poultry	136.0	119.0	0.0	0.0	3,691.5	1,604.0	0.0	0.0	3,827.5	1,723.0	0.0	0.0
	Swine	0.0	0.0	224,972.8	59.2	0.0	0.0	0.0	0.0	0.0	0.0	224,972.8	59.2
	Compost	1.0	4.0	0.0	0.0	55.0	5.1	0.0	0.0	56.0	9.1	0.0	0.0
Calvert	Beef	206.0	69.4	0.0	0.0	0.0	0.0	0.0	0.0	206.0	69.4	0.0	0.0
	Horse	135.9	64.4	0.0	0.0	0.0	0.0	0.0	0.0	135.9	64.4	0.0	0.0
Caroline	Beef	54.0	39.0	7,600,000.0	0.0	0.0	0.0	0.0	0.0	54.0	39.0	7,600,000.0	0.0
	Dairy	9,598.0	22.0	8,275,337.0	0.0	0.0	0.0	165,000.0	33.0	9,598.0	22.0	8,440,337.0	33.0
	Horse	119.5	36.9	0.0	0.0	129.0	21.6	0.0	0.0	248.5	58.5	0.0	0.0
	Compost	2,015.0	1,000.0	0.0	0.0	9,205.0	3,577.3	0.0	0.0	11,220.0	4,577.3	0.0	0.0
	Other Animal Manure	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0	0.0	0.0	0.0
	Poultry	4,416.5	2,359.2	0.0	0.0	26,671.6	10,964.3	0.0	39.8	31,088.1	13,323.5	0.0	39.8
Carroll	Beef	15,426.8	2,795.1	339,500.0	141.6	411.0	4,161.0	0.0	0.0	15,837.8	6,956.1	339,500.0	141.6
	Dairy	11,231.0	1,185.0	612,812.0	1,206.6	5,147.0	318.9	2,409,450.0	386.6	16,378.0	1,503.9	8,535,262.0	1,595.2
	Horse	2,306.0	481.2	0.0	0.0	1,491.0	43.5	0.0	0.0	3,797.0	524.7	0.0	0.0
	Poultry	0.2	22.2	0.0	0.0	9,141.0	6,317.2	0.0	0.0	9,141.2	6,339.4	0.0	0.0
	Sheep	99.0	42.0	0.0	0.0	0.0	0.0	0.0	0.0	99.0	42.0	0.0	0.0
	Swine	188.6	48.9	0.0	0.0	0.0	0.0	29,600.0	59.3	188.6	48.9	29,600.0	59.3
	Compost	0.0	0.0	0.0	0.0	10.0	5.8	0.0	0.0	10.0	5.8	0.0	0.0
	Other Animal Manure	462.4	164.0	0.0	0.0	0.0	0.0	0.0	0.0	462.4	164.0	0.0	0.0
Cecil	Beef	2,717.9	356.3	0.0	0.0	273.0	20.0	0.0	0.0	2,990.9	376.3	0.0	0.0
	Dairy	8,176.2	764.4	23,638,783.0	2,232.4	83.5	46.0	3,724,000.0	276.2	8,259.7	810.4	27,362,783.0	2,508.6
	Horse	474.0	225.5	0.0	0.0	0.0	0.0	0.0	0.0	474.0	225.5	0.0	0.0
	Poultry	1,042.0	220.0	0.0	0.0	5,880.6	2,706.0	0.0	0.0	6,922.6	2,926.0	0.0	0.0
	Sheep	124.0	36.0	0.0	0.0	0.0	0.0	0.0	0.0	124.0	36.0	0.0	0.0
	Swine	301.0	69.0	141,840.0	12.3	0.0	0.0	0.0	0.0	301.0	69.0	141,840.0	12.3
	Compost	4,597.0	434.6	0.0	0.0	1,753.0	425.2	0.0	0.0	6,350.0	859.8	0.0	0.0
	Other Animal Manure	315.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	315.0	80.0	0.0	0.0
Charles	Beef	289.8	124.4	0.0	0.0	0.0	0.0	0.0	0.0	289.8	124.4	0.0	0.0
	Dairy	70.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	70.0	16.0	0.0	0.0
	Horse	260.9	142.9	0.0	0.0	0.0	0.0	0.0	0.0	260.9	142.9	0.0	0.0
	Other Animal Manure	102.4	4.7	0.0	0.0	0.0	0.0	0.0	0.0	102.4	4.7	0.0	0.0
	Swine	32.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0	32.4	1.2	0.0	0.0
	Poultry	0.0	0.4	0.0	0.0	759.4	745.1	0.0	0.0	759.4	745.5	0.0	0.0
Dorchester	Beef	107.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0	107.0	9.6	0.0	0.0
	Horse	145.0	86.7	0.0	0.0	0.0	0.0	0.0	0.0	145.0	86.7	0.0	0.0
	Poultry	5,850.0	1,896.9	0.0	0.0	24,230.0	13,079.8	282.0	94.0	30,080.0	14,976.7	282.0	94.0
	Swine	0.0	0.0	14,400.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	14,400.0	6.5
	Compost	0.0	0.0	0.0	0.0	90.0	71.5	0.0	0.0	90.0	71.5	0.0	0.0
Frederick	Beef	19,513.9	3,333.3	4,236,809.0	874.8	60.0	32.0	0.0	0.0	19,573.9	3,365.3	4,236,809.0	874.8
	Dairy	24,979.0	3,391.8	36,716,527.0	1,319,905.2	702.0	81.0	1,237,000.0	268.5	25,681.0	3,472.8	37,953,527.0	1,321,173.7
	Horse	1,956.6	773.6	0.0	0.0	3,356.0	61.2	0.0	0.0	5,312.6	834.8	0.0	0.0
	Poultry	1,525.0	958.0	0.0	0.0	5,763.8	3,074.7	0.0	0.0	7,288.8	4,032.7	0.0	0.0
	Sheep	109.9	50.5	0.0	0.0	0.0	0.0	0.0	0.0	109.9	50.5	0.0	0.0
	Swine	149.7	52.0	140,000.0	35.0	0.0	0.0	0.0	0.0	149.7	52.0	140,000.0	35.0
	Compost	0.0	0.0	0.0	0.0	229.5	57.5	0.0	0.0	229.5	57.5	0.0	0.0
Other Animal Manure	59.9	3.0	100,000.0	45.0	0.0	0.0	0.0	0.0	59.9	3.0	100,000.0	45.0	
Garrett	Beef	16,087.3	3,202.3	1,200,000.0	40.0	0.0	0.0	0.0	207.0	16,087.3	3,202.3	1,200,000.0	247.0
	Dairy	285,645.0	919.6	11,355,409.0	2,872.3	0.0	0.0	0.0	0.0	285,645.0	919.6	11,355,409.0	2,872.3
	Horse	306.0	219.4	0.0	0.0	0.0	0.0	0.0	0.0	306.0	219.4	0.0	0.0
	Poultry	4.0	2.0	0.0	0.0	2,461.1	1,306.4	0.0	0.0	2,465.1	1,310.4	0.0	0.0
	Sheep	134.0	27.0	0.0	0.0	0.0	0.0	0.0	0.0	134.0	27.0	0.0	0.0
	Swine	25.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	12.0	0.0	0.0
Other Animal Manure	2,562.0	222.2	0.0	0.0	0.0	0.0	0.0	0.0	2,562.0	222.2	0.0	0.0	
Harford	Beef	6,577.3	1,459.6	9,665,000.0	280.2	0.0	0.0	0.0	0.0	6,577.3	1,459.6	9,665,000.0	280.2
	Dairy	9,095.3	1,144.1	14,102,334.0	2,295.5	0.0	0.0	0.0	0.0	9,095.3	1,144.1	14,102,334.0	2,295.5
	Horse	883.7	1,063.3	0.0	0.0	50.0	10.0	0.0	0.0	933.7	1,073.3	0.0	0.0
	Poultry	336.0	125.5	0.0	0.0	2,453.0	924.3	0.0	0.0	2,789.0	1,049.8	0.0	0.0
	Sheep	183.2	55.5	0.0	0.0	0.0	0.0	0.0	0.0	183.2	55.5	0.0	0.0
	Swine	124.0	17.2	0.0	0.0	0.0	0.0	0.0	0.0	124.0	17.2	0.0	0.0
Other Animal Manure	51.1	13.3	0.0	0.0	0.0	0.0	0.0	0.0	51.1	13.3	0.0	0.0	

Howard	Beef	1,187.9	324.4	0.0	0.0	0.0	0.0	0.0	0.0	1,187.9	324.4	0.0	0.0
	Dairy	2,807.0	462.3	2,791,000.0	440.0	240.0	1.20	0.0	0.0	3,047.0	474.3	2,791,000.0	440.0
	Horse	1,795.5	157.0	0.0	0.0	0.0	0.0	0.0	0.0	1,795.5	157.0	0.0	0.0
	Poultry	2.2	41.2	0.0	0.0	1,474.3	58.6.8	0.0	0.0	1,476.5	628.0	0.0	0.0
	Sheep	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0
	Swine	4.0	9.4	0.0	0.0	0.0	0.0	0.0	0.0	4.0	9.4	0.0	0.0
	Compost	63.0	10.0	0.0	0.0	7.9	0.5	0.0	0.0	70.9	10.5	0.0	0.0
	Other Animal Manure	276.8	102.3	0.0	0.0	0.0	0.0	0.0	0.0	276.8	102.3	0.0	0.0
Kent	Beef	550.0	83.5	0.0	0.0	755.0	75.0	0.0	0.0	1,305.0	158.5	0.0	0.0
	Dairy	22,503.5	1,282.4	67,700,575.0	2,569.2	0.0	65.0	801,000.0	11.6.5	22,503.5	1,347.4	68,501,575.0	2,685.7
	Horse	453.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	453.0	24.0	0.0	0.0
	Poultry	202.0	120.0	0.0	0.0	67,716.8	18,125.5	0.0	0.0	67,818.8	18,245.5	0.0	0.0
	Sheep	314.0	157.0	0.0	0.0	0.0	0.0	0.0	0.0	314.0	157.0	0.0	0.0
	Swine	0.0	0.0	6,654,547.0	523.0	0.0	0.0	0.0	0.0	0.0	0.0	6,654,547.0	523.0
	Compost	0.0	0.0	0.0	0.0	1,780.0	89.0	0.0	0.0	1,780.0	89.0	0.0	0.0
	Other Animal Manure	2.0	1.0	0.0	0.0	15.0	3.0	0.0	0.0	17.0	4.0	0.0	0.0
Montgomery	Beef	1,359.2	313.5	0.0	7.2	0.0	0.0	0.0	0.0	1,359.2	313.5	0.0	7.2
	Dairy	443.0	76.6	471,000.0	0.0	0.0	0.0	0.0	0.0	443.0	76.6	471,000.0	0.0
	Horse	2,445.2	740.5	0.0	24.1	0.0	0.0	0.0	0.0	2,445.2	740.5	0.0	24.1
	Poultry	0.5	23.5	0.0	0.0	41.2.0	207.0	0.0	0.0	41.2.5	230.5	0.0	0.0
	Sheep	18.3	8.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3	8.0	0.0	0.0
	Swine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Compost	0.0	0.0	0.0	0.0	1.4	0.3	0.0	0.0	1.4	0.3	0.0	0.0
	Other Animal Manure	217.6	37.7	0.0	0.0	0.0	0.0	0.0	0.0	217.6	37.7	0.0	0.0
Prince George's	Beef	314.0	82.8	0.0	0.0	0.0	0.0	0.0	0.0	314.0	82.8	0.0	0.0
	Dairy	0.0	0.0	1,600,000.0	320.0	0.0	0.0	0.0	0.0	0.0	0.0	1,600,000.0	320.0
	Horse	528.5	156.6	0.0	0.0	0.0	0.0	0.0	0.0	528.5	156.6	0.0	0.0
	Poultry	8.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	6.0	0.0	0.0
	Sheep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Swine	500.0	35.0	0.0	0.0	6.0	4.5	0.0	0.0	506.0	39.5	0.0	0.0
	Compost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Other Animal Manure	5.5	0.0	0.0	0.0	32.0	13.9	0.0	0.0	37.5	13.9	0.0	0.0
Queen Anne's	Beef	1,392.0	450.9	0.0	0.0	0.0	0.0	0.0	0.0	1,392.0	450.9	0.0	0.0
	Dairy	4,630.6	713.4	11,442,839.0	1,058.8	0.0	0.0	0.0	0.0	4,630.6	713.4	11,442,839.0	1,058.8
	Horse	129.0	90.1	0.0	0.0	16.0	35.0	0.0	0.0	145.0	125.1	0.0	0.0
	Poultry	5,973.6	1,800.7	0.0	0.0	38,917.2	18,253.7	0.0	0.0	44,890.8	20,054.4	0.0	0.0
	Sheep	17.5	10.4	0.0	0.0	0.0	0.0	0.0	0.0	17.5	10.4	0.0	0.0
	Swine	373.0	57.0	0.0	0.0	0.0	0.0	0.0	0.0	373.0	57.0	0.0	0.0
	Compost	0.0	0.0	0.0	0.0	2,720.0	136.0	0.0	0.0	2,720.0	136.0	0.0	0.0
	Other Animal Manure	0.0	0.0	0.0	0.0	25.0	161.0	0.0	0.0	25.0	161.0	0.0	0.0
Saint Mary's	Beef	1,826.7	328.1	0.0	0.0	0.0	0.0	0.0	0.0	1,826.7	328.1	0.0	0.0
	Dairy	288.5	63.0	222,000.0	99.0	0.0	0.0	0.0	0.0	288.5	63.0	222,000.0	99.0
	Horse	908.4	298.7	0.0	0.0	0.0	0.0	0.0	0.0	908.4	298.7	0.0	0.0
	Poultry	77.6	60.5	0.0	0.0	31,491.5	3,710.8	0.0	0.0	31,569.1	3,771.3	0.0	0.0
	Sheep	38.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0	38.0	31.0	0.0	0.0
	Swine	82.5	34.0	25,000.0	20.0	0.0	0.0	0.0	0.0	82.5	34.0	25,000.0	20.0
	Compost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Other Animal Manure	263.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	263.0	45.0	0.0	0.0
Somerset	Beef	66.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	66.0	12.5	0.0	0.0
	Poultry	378.0	248.0	0.0	0.0	2,999.5	1,855.5	0.0	0.0	3,377.5	2,105.5	0.0	0.0
	Other Animal Manure	12.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	9.0	0.0	0.0
Talbot	Beef	974.7	256.3	313,000.0	62.6	30.0	10.0	0.0	0.0	1,004.7	266.3	313,000.0	62.6
	Dairy	1,737.0	241.6	1,498,900.0	393.9	0.0	0.0	108,500.0	21.0	1,737.0	241.6	1,608,400.0	414.9
	Horse	687.8	110.1	0.0	0.0	105.4	37.0	0.0	0.0	793.2	147.1	0.0	0.0
	Poultry	2,153.0	1,378.0	0.0	0.0	21,516.9	9,901.2	0.0	0.0	23,669.9	11,279.2	0.0	0.0
	Swine	6.8	14.6	0.0	0.0	0.0	0.0	0.0	0.0	6.8	14.6	0.0	0.0
	Compost	0.0	0.0	0.0	0.0	266.0	138.0	0.0	0.0	266.0	138.0	0.0	0.0
Washington	Beef	12,318.0	2,373.4	2,211,000.0	49.2.0	666.6	128.0	0.0	0.0	12,984.6	2,501.4	2,211,000.0	49.2.0
	Dairy	56,000.0	6943.1	98,227,556.0	1,635.9.2	2,169.0	403.8	4,123,153.0	1,026.0	58,169.0	7,346.9	102,350,709.0	17,385.2
	Horse	169.0	45.9	0.0	0.0	120.0	24.0	0.0	0.0	289.0	69.9	0.0	0.0
	Poultry	1,796.0	909.0	0.0	0.0	8,365.4	4,726.6	0.0	37.2	10,161.4	5,635.6	0.0	37.2
	Sheep	771.9	165.0	0.0	0.0	0.0	0.0	0.0	0.0	771.9	165.0	0.0	0.0
	Swine	113.0	35.0	650,000.0	129.0	0.0	0.0	0.0	0.0	113.0	35.0	650,000.0	129.0
	Other Animal Manure	1,471.1	315.0	2922,900.0	510.0	484.5	32.5	0.0	103.2	1,955.6	347.5	2,922,900.0	613.2
Wicomico	Horse	89.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	89.0	5.0	0.0	0.0
	Poultry	2,119.0	993.0	0.0	0.0	5,900.9	16,651.2	0.0	78.0	8,019.9	17,644.2	0.0	78.0
	Other Animal Manure	25.0	14.0	0.0	0.0	14.0	9.0	0.0	0.0	39.0	23.0	0.0	0.0
Worcester	Beef	75.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	18.0	0.0	0.0
	Horse	230.6	87.6	0.0	0.0	0.0	0.0	0.0	0.0	230.6	87.6	0.0	0.0
	Poultry	5,828.0	4,480.5	0.0	0.0	9,363.9	5,791.9	0.0	0.0	15,191.9	10,272.4	0.0	0.0
	Sheep	20.4	10.2	0.0	0.0	0.0	0.0	0.0	0.0	20.4	10.2	0.0	0.0
	Swine	0.0	0.0	0.0	0.0	0.0	0.0	277.0	160.0	0.0	0.0	277.0	160.0
	Compost	0.0	0.0	0.0	0.0	1.5	2.0	0.0	0.0	1.5	2.0	0.0	0.0

State Totals	Beef	87,647.3	16,800.7	8,946,809.0	1,878.4	2,251.6	4,432.6	0.0	207.0	89,898.9	21,233.3	8,946,809.0	2,085.4
	Dairy	440,993.8	17,597.7	286,461,617.0	162,171.1	8,827.5	992.3	12,684,603.0	2,150.9	449,821.3	18,590.0	299,146,220.0	164,322.0
	Horse	17,230.8	5,697.7	0.0	24.1	5,299.9	240.9	0.0	0.0	22,530.7	5,938.6	0.0	24.1
	Poultry	31,849.1	15,764.6	0.0	0.0	270,554.2	120,917.9	282.0	249.0	302,403.3	136,682.5	282.0	249.0
	Sheep	1,854.2	633.1	0.0	0.0	20.0	117.7	0.0	0.0	1,874.2	750.8	0.0	0.0
	Swine	1,400.0	350.3	7,850,759.8	785.0	0.0	0.0	296,277.0	219.3	1,400.0	350.3	8,147,036.8	1,004.3
	Compost	7,176.0	1,483.6	0.0	0.0	16,125.4	4,512.7	0.0	0.0	23,301.4	5,996.3	0.0	0.0
	Other Animal Manure	5,905.8	1,011.2	3,022,600.0	555.0	795.5	219.4	0.0	103.2	6,701.3	1,230.6	3,022,600.0	658.2
	Total	594,056.9	59,339.0	306,281,785.8	165,413.5	303,874.1	131,433.4	12,981,162.0	2,929.5	897,931.0	190,772.5	319,262,947.8	168,342.9

* **On Farm Collected Manure**- Includes manure that was produced on farm and was collected in in 2023, and addition to any manure that was in storage and stockpiled previous years.

** **Other Animal Manure** is for animal types not listed or animal manures that have been mixed together.

Attachment 2

2023 Manure Sent to Alternative Use/ Manure Broker/ Other Farm Operation

County	Manure Type	Alternative Use Facility		Manure/Organics Broker		Other Farm Operations		Total	
		Tons	Gallons	Tons	Gallons	Tons	Gallons	Tons	Gallons
Anne Arundel	Horse	14,736.0	0.0	231.0	0.0	889.3	1.0	15,856.3	1.0
	Compost	0.0	0.0	0.0	0.0	108.0	0.0	108.0	0.0
Baltimore/Baltimore City	Beef	0.0	0.0	0.0	0.0	56.0	0.0	56.0	0.0
	Dairy	0.0	0.0	0.0	0.0	486.0	115,500.0	486.0	115,500.0
	Horse	708.0	64.0	2,840.5	0.0	95.5	1,920.0	3,644.0	1,984.0
	Sheep	0.0	0.0	0.0	0.0	5.0	0.0	5.0	0.0
Calvert	Horse	13.0	0.0	0.0	0.0	0.0	0.0	13.0	0.0
	Poultry	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Cardine	Beef	0.0	0.0	0.0	0.0	0.0	10,000,000.0	0.0	10,000,000.0
	Dairy	0.0	0.0	0.0	0.0	120.0	0.0	120.0	0.0
	Horse	86.0	0.0	0.0	0.0	210.2	0.0	296.2	0.0
	Poultry	0.0	0.0	5,017.6	0.0	33,207.3	0.0	38,225.0	0.0
	Swine	0.0	0.0	0.0	0.0	380.0	0.0	380.0	0.0
Carroll	Beef	0.0	0.0	0.0	0.0	207.0	0.0	207.0	0.0
	Horse	183.0	0.0	535,876.0	0.0	69.8	0.0	536,128.8	0.0
	Poultry	0.0	0.0	0.0	0.0	5,375.5	0.0	5,375.5	0.0
	Compost	0.0	0.0	0.0	0.0	8.4	0.0	8.4	0.0
Cecil	Horse	11,983.2	0.0	3,931.0	0.0	239.1	209,200.0	16,153.3	209,200.0
	Poultry	0.0	0.0	0.0	0.0	3,879.0	0.0	3,879.0	0.0
	Swine	0.0	0.0	0.0	0.0	0.0	220,000.0	0.0	220,000.0
	Compost	7,000.0	0.0	0.0	0.0	2,660.0	0.0	9,660.0	0.0
	Other Animal Manure	0.0	0.0	0.0	0.0	0.0	871,878.0	0.0	871,878.0
Charles	Horse	0.0	0.0	0.0	0.0	26.0	20.0	26.0	20.0
Dorchester	Horse	0.0	0.0	0.0	0.0	26.1	0.0	26.1	0.0
	Poultry	0.0	0.0	1,826.2	0.0	13,550.0	640.0	15,376.2	640.0
	Swine	0.0	0.0	264.0	0.0	0.0	0.0	264.0	0.0
Frederick	Beef	126.0	0.0	20.0	0.0	264.0	0.0	410.0	0.0
	Dairy	0.0	0.0	0.0	0.0	8.0	138,600.0	8.0	138,600.0
	Horse	228.0	0.0	308.0	0.0	1,543.9	0.0	2,079.9	0.0
	Poultry	0.0	0.0	0.0	0.0	500.0	0.0	500.0	0.0
	Sheep	0.0	0.0	0.0	0.0	99.0	0.0	99.0	0.0
	Other Animal Manure	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0
Harford	Beef	0.0	0.0	30.0	0.0	25.0	0.0	55.0	0.0
	Dairy	0.0	0.0	0.0	0.0	150.0	400,000.0	150.0	400,000.0
	Horse	1,237.0	60.0	289.2	0.0	237.7	0.0	1,763.9	60.0
	Poultry	0.0	0.0	0.0	0.0	24.0	0.0	24.0	0.0
Howard	Dairy	0.0	0.0	0.0	0.0	200.0	0.0	200.0	0.0
	Horse	675.0	0.0	2,142.0	0.0	2,060.4	0.0	4,877.4	0.0
Kent	Beef	0.0	0.0	0.0	0.0	90.0	0.0	90.0	0.0
	Dairy	0.0	0.0	0.0	0.0	0.0	1,344,000.0	0.0	1,344,000.0
	Horse	0.0	0.0	503.0	0.0	0.0	0.0	503.0	0.0
	Poultry	0.0	0.0	0.0	0.0	14,133.2	0.0	14,133.2	0.0
	Compost	0.0	0.0	181.4	0.0	0.0	0.0	181.4	0.0
	Other Animal Manure	0.0	0.0	0.0	0.0	0.0	1,061,000.0	0.0	1,061,000.0
Montgomery	Horse	1,909.1	0.0	4,400.0	0.0	1,611.7	116.5	7,920.8	116.5
Prince George's	Beef	0.0	0.0	0.0	0.0	10.0	0.0	10.0	0.0
	Horse	231.0	0.0	22.0	0.0	376.0	0.0	629.0	0.0

Queen Anne's	Beef	0.0	0.0	0.0	0.0	816.0	0.0	816.0	0.0
	Dairy	0.0	0.0	0.0	0.0	393.5	0.0	393.5	0.0
	Poultry	29.0	0.0	4,603.0	0.0	20,365.6	0.0	24,997.6	0.0
	Horse	0.0	0.0	189.7	0.0	313.0	0.0	502.7	0.0
Saint Mary's	Beef	0.0	0.0	0.0	0.0	310.0	0.0	310.0	0.0
	Horse	64.0	0.0	2.0	0.0	281.0	0.0	347.0	0.0
	Poultry	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
	Compost	0.0	0.0	4.2	0.0	24.3	0.0	28.5	0.0
	Other Animal Manure	0.0	0.0	0.0	0.0	0.0	10,400.0	0.0	10,400.0
Somerset	Poultry	0.0	0.0	16,242.5	0.0	4,781.0	0.0	21,023.5	0.0
Talbot	Dairy	0.0	0.0	0.0	0.0	0.0	109,500.0	0.0	109,500.0
	Horse	313.0	0.0	416.0	0.0	195.0	0.0	924.0	0.0
	Poultry	0.0	0.0	0.0	0.0	1,809.0	0.0	1,809.0	0.0
Washington	Beef	0.0	0.0	63.0	0.0	1,721.0	0.0	1,784.0	0.0
	Dairy	35.0	0.0	0.0	51,000.0	2,521.0	2,575,540.0	2,556.0	2,626,540.0
	Horse	0.0	0.0	0.0	0.0	410.0	0.0	410.0	0.0
	Poultry	0.0	0.0	0.0	0.0	518.0	0.0	518.0	0.0
	Other Animal Manure	4.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Wicomico	Horse	0.0	0.0	0.0	0.0	81.4	0.0	81.4	0.0
	Poultry	0.0	0.0	13,039.2	0.0	5,073.2	0.0	18,112.3	0.0
	Other Animal Manure	0.0	16,000.0	0.0	0.0	0.0	0.0	0.0	16,000.0
Worcester	Poultry	528.8	0.0	38,449.6	0.0	10,385.4	0.0	49,363.9	0.0
	Other Animal Manure	0.0	0.0	472.0	0.0	0.0	0.0	472.0	0.0
State Totals	Beef	126.0	0.0	113.0	0.0	3,499.0	10,000,000.0	3,738.0	10,000,000.0
	Dairy	35.0	0.0	0.0	51,000.0	3,878.5	4,683,140.0	3,913.5	4,734,140.0
	Horse	32,366.3	124.0	551,150.4	0.0	8,666.1	211,257.5	592,182.7	211,381.5
	Compost	7,000.0	0.0	185.6	0.0	2,800.7	0.0	9,986.3	0.0
	Poultry	557.8	0.0	49,896.4	0.0	103,751.1	640.0	154,205.3	640.0
	Sheep	0.0	0.0	0.0	0.0	104.0	0.0	104.0	0.0
	Swine	0.0	0.0	264.0	0.0	380.0	220,000.0	644.0	220,000.0
	Other Animal Manure	7,000.0	0.0	185.6	0.0	2,800.7	0.0	9,986.3	0.0
Total	47,085.1	124.0	601,795.0	51,000.0	125,880.1	15,115,037.5	774,760.2	15,166,161.5	

* Other Animal Manure- is for animal types not listed or animal manures that have been mixed together

Attachment 3

2023 - Manure Exported Out of State

County	Manure Type	Pennsylvania		Delaware		North Carolina	VA/WV/MA		Total	
		Tons	Gallons	Tons	Gallons		Tons	Gallons	Tons	Gallons
Anne Arundel	Horse	7,308.8	0.0	0.0	0.0	0.0	0.0	0.0	7,308.8	0.0
Baltimore/Baltimore City	Horse	1,803.6	0.0	0.0	0.0	0.0	0.0	0.0	1,803.6	0.0
Caroline	Beef	0.0	0.0	0.0	10,000,000.0	0.0	0.0	0.0	0.0	10,000,000.0
	Horse	86.0	0.0	0.0	0.0	0.0	0.0	0.0	86.0	0.0
	Poultry	0.0	0.0	2,860.2	0.0	289.6	0.0	0.0	3,149.9	0.0
Carroll	Beef	170.0	0.0	0.0	0.0	0.0	30.0	0.0	200.0	0.0
	Horse	180.0	0.0	0.0	0.0	0.0	0.0	0.0	180.0	0.0
Cecil	Horse	12,356.3	209,200.0	6.0	0.0	0.0	0.0	0.0	12,362.3	209,200.0
	Poultry	0.0	0.0	1,480.0	0.0	0.0	0.0	0.0	1,480.0	0.0
	Compost	9,300.0	0.0	0.0	0.0	0.0	0.0	0.0	9,300.0	0.0
Charles	Horse	0.0	0.0	0.0	0.0	0.0	35.0	0.0	35.0	0.0
Dorchester	Poultry	0.0	0.0	3,740.7	0.0	0.0	0.0	0.0	3,740.7	0.0
Frederick		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Harford	Beef	25.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0
	Dairy	150.0	400,000.0	0.0	0.0	0.0	0.0	0.0	150.0	400,000.0
	Horse	643.4	80.0	0.0	0.0	0.0	0.0	0.0	643.4	80.0
Howard	Horse	270.3	0.0	0.0	0.0	0.0	0.0	0.0	270.3	0.0
Montgomery	Horse	3,260.0	0.0	0.0	0.0	0.0	97.0	0.0	3,357.0	0.0
Prince George's	Horse	92.0	0.0	0.0	0.0	0.0	0.0	0.0	92.0	0.0
Queen Anne's	Horse	53.2	0.0	0.0	0.0	0.0	0.0	0.0	53.2	0.0
	Poultry	0.0	0.0	2,030.0	0.0	0.0	0.0	0.0	2,030.0	0.0
Somerset	Poultry	1,846.0	0.0	4,624.2	0.0	1,134.1	0.0	0.0	7,604.3	0.0
Talbot	Horse	366.0	0.0	0.0	0.0	0.0	0.0	0.0	366.0	0.0
Washington	Beef	612.0	0.0	0.0	0.0	0.0	20.0	0.0	632.0	0.0
	Dairy	7,218.0	1,328,000.0	0.0	0.0	0.0	0.0	0.0	7,218.0	1,328,000.0
	Horse	225.0	0.0	0.0	0.0	0.0	0.0	0.0	225.0	0.0
	Poultry	17.6	0.0	0.0	0.0	0.0	0.0	0.0	17.6	0.0
Wicomico	Poultry	0.0	0.0	12,599.3	0.0	1,366.5	150.0	0.0	13,955.8	0.0
Worcester	Poultry	165.0	0.0	34,282.7	0.0	1,846.0	0.0	0.0	36,293.7	0.0
State Totals	Beef	25.0	0.0	0.0	10,000,000.0	0.0	0.0	0.0	25.0	10,000,000.0
	Dairy	7,368.0	1,728,000.0	0.0	0.0	0.0	0.0	0.0	7,368.0	1,728,000.0
	Horse	26,644.6	209,280.0	6.0	0.0	0.0	132.0	0.0	26,782.6	209,280.0
	Poultry	2,028.6	0.0	61,617.1	0.0	4,626.2	150.0	0.0	68,271.9	0.0
	Compost	9,300.0	0.0	0.0	0.0	0.0	0.0	0.0	9,300.0	0.0
Total		45,366.2	1,937,280.0	61,623.1	10,000,000.0	4,626.2	150.0	0.0	111,747.5	11,937,280.0