

Agricultural Inspections
July 1, 2019 through June 30, 2020

This document summarizes the accomplishments of the expanded agricultural inspection program from the timeframe July 1, 2019 through June 30, 2020. There were no major changes to the program in 2019-2020; however, interim procedures to be followed during the COVID -19 public health emergency were released on April 2, 2020, and continued through the end of this report date, which allowed for continued operations while maintaining social distance. All data related to the Chesapeake Bay Agriculture Inspection Program (CBAIP) and the Act 38 Nutrient Management Program were collected through a centralized geospatial database, which, for the first time reflects a full year of Act 38 inspection data.

Table 1. Total number of PA farms in the Chesapeake Bay Watershed as identified in the 2017 USDA Agriculture Census and total PA acres in agriculture land use as identified by the Bay Program.

| | |
|---|------------------|
| 2017 USDA Ag Census Farms in PA Chesapeake Bay Watershed | 30,193 |
| 2018 Ag Land Use Acres in PA Chesapeake Bay Watershed | 3,067,629 |

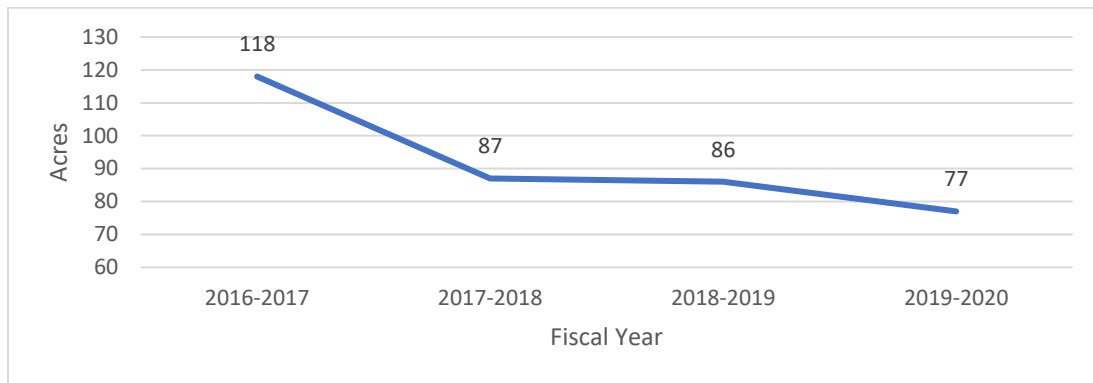
Table 2. Farms and agriculture acres inspected within Pennsylvania’s portion of the Chesapeake Bay Watershed Since the Inception of the Expanded Agricultural Inspection Program

| | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 | Totals |
|---|--------------------|--------------------|--------------------|-------------------|----------------------|
| Total Farms Inspected | 2,823 | 2,924 | 2,951 | 2,464 | 11,162 |
| Total Acres Inspected | 393,426 (12.7%) | 329,468 (10.6%) | 315,823 (10.3%) | 241,489 (7.9%) | 1,280,206 (41.7%) |
| PA Bay Farms Inspected under the Act 38 Program | 743 | 814 | 886 | 596 | 3039 |
| PA Bay Ag Acres Inspected under the Act 38 Program | 147,762 | 145,680 | 138,139 | 97,767 | 529,348 |
| PA Farms Inspected under the CB Ag Inspection Program | 2,080 | 2,110 | 2,065 | 1,868 | 8,123 |
| PA Acres inspected under the CB Ag Inspection Program | 245,664 | 183,788 | 177,684 | 143,722 | 750,858 |

The total number of farms inspected in 2019-2020 decreased by 487 compared to the previous year’s total, and the acreage inspected decreased by 76,334 acres, due to the COVID-19 public health emergency and reduced average farm size (see discussion below).

The average farm size inspected under the CBAIP continues to decrease as represented below in Figure 1.

Figure 1: Average Farm Size of Agricultural Operations Inspected Under CBAIP by Fiscal Year



Interim procedures for inspections conducted under the CBAIP during the COVID-19 public health emergency greatly reduced disruptions to program activities; however, lower inspection numbers and inspected acres can partially be attributed to the COVID-19 public health emergency. March and April saw respective 26% and 52% reductions in the number of inspections completed under the CBAIP compared to the previous year. Historically, 20% of the year’s inspections are completed in March and April. Conversely, inspections completed in March and April of 2020 contributed only 13% of the total inspections completed in 2019-2020. The percent of inspections completed in May of 2020 is consistent with previous years (approximately 10%); however, the number of inspections completed in June of 2020 is more than 178% of those completed in June of 2019, contributing 18% of the total inspections for the 2019-2020 fiscal year.

Historical data is not readily available for the Act 38 program identifying the date of inspection; therefore, we cannot compare specific months in 2020 to the same months in previous years. However, the date of inspection is a data point captured in the centralized geodatabase, and we can clearly see a reduction in the percent of inspections completed March through May of 2020 as compared to other months throughout the 2019-2020 fiscal year. The Act 38 inspections completed in March, April, and May of 2020 contribute only 11% of the total inspections completed in 2019-2020. The number of inspections completed in June of 2020 begin to approach pre-COVID levels but are still a percentage point lower than any month between July 2019 and February 2020.

The COVID-19 public health emergency created unprecedented obstacles to program implementation during the 2019-2020 fiscal year. However, due to the achievements of county conservation district partners and DEP Regional Office inspectors in previous years, the expanded agricultural inspection program has inspected a total of 1,280,206 acres over the four years of the program, an average of 10.4% of the agricultural land use acres in the Pennsylvania portion of the Chesapeake Bay Watershed per year of the program.

Compliance

The compliance rate for Act 38 Nutrient Management Plan (“NMP”) development and implementation for the Chesapeake Bay Watershed was found to be 85% at the time of inspection. Further follow-up activities are required as part of the compliance assessment of Act 38 regulated farms, with the vast majority of those found to be out of compliance coming into compliance within 6 months after the annual inspection. For agricultural operations that were inspected as part of the initial CBAIP, farm planning compliance rates at the time of the initial inspection were found to be 61% for Manure Management Plans

(MMPs) and 62% for Agricultural Erosion and Sediment Control (Ag E&S) Plans and NRCS Conservation Plans that meet the Chapter 102 regulatory requirements. With follow-up from the conservation districts and DEP after initial inspections, the MMP and Ag E&S Plan compliance rate for these operations increased to 98%.

Not included in the above results are the verifications performed via the Resource Enhancement and Protection (REAP) Program, which is administered by the State Conservation Commission. Since 2007, REAP has approved over 3,600 applications from almost 2,800 farmers (farmers can apply more than once to the program). A farmer must have their environmental compliance status verified each time they apply.

Chesapeake Bay Agricultural Inspection Program: Compliance and Enforcement

Compliance rates at the time of initial inspection for MMPs and Ag E&S Plans are comparable to the previous years. It is important to note the percentage found to have had planning and/or technical assistance provided by another party (agency or private consultant) to develop the plan.

Table 3. The percent of administratively complete plans found at the time of initial inspection for farms required to have and implement the plan(s).

| Manure Management Plan | Percent of Total Required |
|--|----------------------------------|
| Administratively Complete at the time of Initial Inspection | 61% |
| Planning/Technical Assistance Provided | 85% |
| | |
| Agricultural Erosion and Sediment Control (Ag E&S) Plan | Percent of Total Required |
| Administratively Complete at the time of Initial Inspection | 62% |
| Planning/Technical Assistance Provided | 99% |

It should be noted that 98% of all farms inspected in 2019 – 2020 met the planning obligations by the end of the state fiscal year.

Table 4. The total referrals to the DEP Bureau of Clean Water for continued non-compliance for plan violations, along with further enforcement actions taken on those operations.

| | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 | Total |
|--|------------------|------------------|------------------|------------------|--------------|
| Referrals to DEP Bay Program Office | 21 | 87 | 66 | 66 | 240 |
| Notices of Violation | 21 | 87 | 66 | 64* | 238 |
| Field Orders | 0 | 22 | 47 | 16 | 85 |
| Consent Order and Agreement | 0 | 1 | 2 | 3 | 6 |
| Closed Cases | 7 | 42 | 64 | 64 | 177 |

*Corrective actions identified on the inspection report were satisfied for two operations before the NOV's were drafted.

BMP Data Collection and Tracking

The CBAIP will again report the best management practices identified at the time of inspection to the Chesapeake Bay Program for annual progress. These best management practices include reporting the implementation of MMPs, manure storages, barnyard runoff controls, forested and grassed buffers, stream fencing, and rotational and prescribed grazing. Other practices may be collected by the inspector if the farmer has implemented those practices and is willing to provide the information.

The Chesapeake Bay Program Partnership has instituted credit durations for all best management practices reported for the states' annual progress. The Nutrient Management best management practices for nitrogen and phosphorus are considered annual credits, therefore the states must report progress toward meeting those goals annually. While those farms and acres inspected via the Act 38 Nutrient Management Program typically remain constant over time, compliance is assessed annually.

The farms and acres inspected under the CBAIP are unique operations. This means that the operations had not been re-visited, unless a follow-up inspection was needed. Out of the total 1,868 farms inspected, 1,560 were inspected by conservation districts and 308 were inspected by DEP regional offices.

Since November of 2017, we have included a voluntary (inspectors were not required but were strongly encouraged) MMP records check of inspected operations which demonstrates if the operation is following their MMP. In 2019-2020, 40% of the inspected operations demonstrated that they are following the MMP through this records check. Through the efforts of county conservation district and DEP staff, over 491,000 acres of MMPs and Nutrient Balance Sheets (NBSs) have been verified as complete and documented in Pennsylvania's portion of Chesapeake Bay Watershed. In 2019-2020, a statistical subsample of over 60,000 acres of cropland covered by MMPs were directly inspected as part of the CBAIP resulting in over 196,000 reportable acres of Core-N from MMPs and NBSs. Additionally, over 158,000 reportable acres of Core-N resulted from Act 38-regulated Concentrated Animal Operations (CAOs) and Concentrated Animal Feeding Operations (CAFOs). This is a total of over 354,000 reportable acres of Core-N toward Pennsylvania's annual numeric progress.

Manure Storage Facilities have a 15-year credit duration in the Chesapeake Bay Program modeling tools. As such, if the facilities are not re-verified to show that it is existing and functioning every 15 years, the practice is removed from the system. Through the CBAIP in 2019-2020, we can report for progress 75 existing liquid manure storage facilities that are equal to or greater than 15 years of age going back to 1985. The total capacity of these reported liquid manure storage facilities is over 21,000,000 gallons.

Conclusion

Another successful year of the expanded agricultural inspection program has shown that most farmers are getting the plans they need. A large part of the inspection program is education. Conservation district and DEP staff are using inspections as a catalyst to help farmers understand what is needed and to get them on track to implement their plans. Implementing best management practices on the land helps to ensure long-term farm sustainability and environmental protection.

Planning and technical assistance are of paramount importance. As indicated by the high percentages of planning/technical assistance provided for MMPs and Ag E&S Plans (Table 3), the development and implementation of plans hinges on the professionals who provide assistance. Funding resources continue to be needed as well. State programs like the Agricultural Plan Reimbursement Program, Small Business Advantage Grants, Resource Enhancement and Protection (REAP) Program, and Growing Greener, as well as, federal programs like NRCS Environmental Quality Incentives Program (EQIP), EPA

Chesapeake Bay Implementation Grant (CBIG), and EPA Chesapeake Bay Regulatory Accountability Program (CBRAP) are critical for the continued improvements made to our local waters.

Acknowledgements

This work would not be accomplished without the active participation of conservation district and DEP staff. Their efforts are much appreciated and the individuals performing inspections and enforcement actions are recognized for the professional and effective way they continue to carry out these activities.