

# **2018 ANNUAL POULTRY REPORT**

COVERING JANUARY 1, 2017 – DECEMBER 31, 2017



**Developed by Accomack County  
Planning & Zoning Staff**

**Reviewed and Approved by the Accomack County  
Planning Commission on March 27, 2018**

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## EXECUTIVE SUMMARY

### Poultry Numbers:

As of March 5, 2018:

- Since July 1, 2014, **240 poultry houses have been authorized by zoning permits.**
- **15 poultry houses are pending.**
- Staff estimates that **284 poultry houses were in existence prior to July 1, 2014.**

As can be seen on the map on page 7 of the report, historically speaking, the majority of the poultry houses in the County were located north of Parksley. Since 2014, a significant number of new poultry houses have been located south of Parksley.

Much of the concern raised by County residents and others regarding the surge in new poultry houses has come from those living in the southern part of the County (and Northampton County). It is not entirely surprising that concerns are being raised given the relatively small number of poultry houses that existed in the southern part of the County prior to 2014.

### Ordinance Changes:

In response to a surge in applications for new poultry houses, Accomack County amended its Zoning Ordinance in February 2016 to tighten regulations regarding confined poultry operations. As part of the ordinance development, Dr. David Matson, from the Eastern Shore Health Department spoke to the Planning Commission on January 13, 2016. Dr. Matson's input was invaluable in the development of the new ordinance. Another notable ordinance amendment occurred in July 2017 when the County removed the possibility of new poultry houses being constructed in residential and general business zoned areas.

### Groundwater:

There has been a great deal of concern regarding **groundwater withdraw**. **A groundwater withdraw number of 3.1 million gallons per day was widely circulated throughout the community. The 3.1 million gallon per day withdraw was an estimate for all poultry houses (pre-2014 and post 2014) that have a Virginia Pollution Abatement (VPA) Permit from the Department of Environmental Quality (DEQ). The 3.1 million gallon number does NOT reflect projected actual usage and is approximately 37 percent higher than the high range of staff estimates (staff estimates are found below) for usage. Staff does not believe that the 3.1 million gallon per day number is valid for estimating actual water use.**

Staff Estimates the following amount of water needed (average) per poultry house per month that includes consumption (drinking water) and cooling water needs:

- 70,950 gallons per month – Low Range
- 81,625 gallons per month – Mid Range
- 152,875 gallons per month – High Range

**Stormwater:**

Confined Poultry Operation approved after July 1, 2014 are required to construct and maintain **stormwater facilities**. County staff performs inspections during construction and also a post construction visits.

Each poultry farm's Stormwater management system has been designed to make sure that the peak flow rate leaving the developed site will be less than or equal to the peak flow rate in the pre-developed condition.

**Economic Impact:**

The most obvious economic impact from the poultry industry in Accomack County are the benefits derived from the Perdue and Tyson processing plants. The 2014 estimated payroll for poultry processing was \$121,251,000 (from January 13, 2016 presentation to BOS). The local economy also benefits from the poultry industry with employment and payroll in the following areas: poultry growers and farm workers, truck drivers, grain elevators, and grain farmers.

**Future Considerations/Items to monitor:**

- Ammonia & Airborne particulates
- Groundwater withdraw regulation and law modification relative to the Columbia aquifer
- Buffer effectiveness
- Personal property taxes
- Groundwater withdraw

## INTRODUCTION

Since 2016, the Accomack Planning Commission has received data and information regarding poultry related matters. In 2016 the Planning Commission issued a report on poultry related matters.

The 2017 Annual Report, covering calendar year 2016, was sparse on details as no new confined poultry operations were in production. This year's report contains substantially more detail and data.

Since the summer of 2015, there has been ongoing community discussion about the increase in numbers of confined poultry operations in Accomack County. In late 2016 and into 2017, with the clearing of large swaths of land and the visible construction of poultry houses, community discussion increased throughout 2017. Local, regional and statewide media coverage of new poultry house construction and other poultry related topics was and continues to be prevalent.

Much of the concern in late 2017 and early 2018 focused on groundwater (well) withdraws and impacts to the lower aquifer, leading to fear that there would be insufficient water supply in the lower aquifer, which is used widely on the Eastern Shore of Virginia for human potable water. Much of the concern was derived from a number that an average of 3.1 million gallons of water per day would be drawn from the lower aquifer for confined poultry use (all poultry houses) in Accomack County. Compounding the community concern was the revelation no groundwater withdrawal permits for confined poultry operations in Accomack County had been obtained from the Virginia Department of Environmental Quality (VA DEQ). Groundwater withdraw permits from the VA DEQ are required when 300,000 gallons of water are withdrawn in a one month period. **As of the writing of this report, it is not clear how many of confined poultry operations constructed prior to 2014 need a groundwater withdraw permit. It is clear to staff that the majority of the new (2014 to date) approved confined poultry operations require a groundwater withdraw permit.**

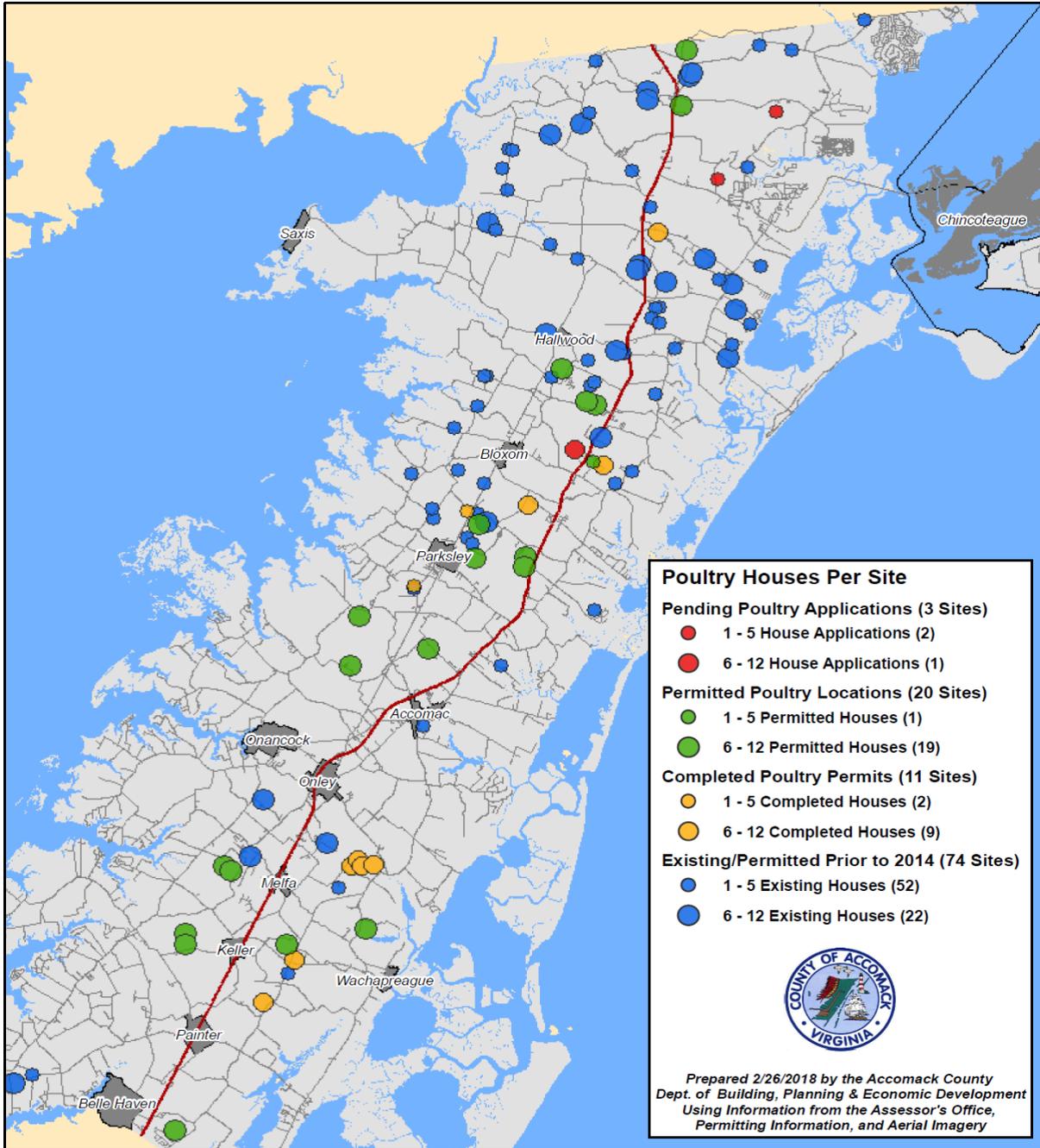
Based on all available information, the recent surge in poultry house construction should be nearly complete by the end of the 2018 construction season.

Accomack County adopted more stringent zoning regulations in February 2016 in response to a significant surge in applications for confined poultry operations. At the time of adoption, the regulations were some of the most restrictive on the Delmarva Peninsula. Further ordinance amendments occurred in 2016 and 2017. The 2017 amendment prohibits new confined poultry operations from locating in Residential or General Business zoned areas.

The purpose of this report is to revisit and update items identified in the 2016 and 2017 reports and identify potential action items and matters that need monitoring moving forward.

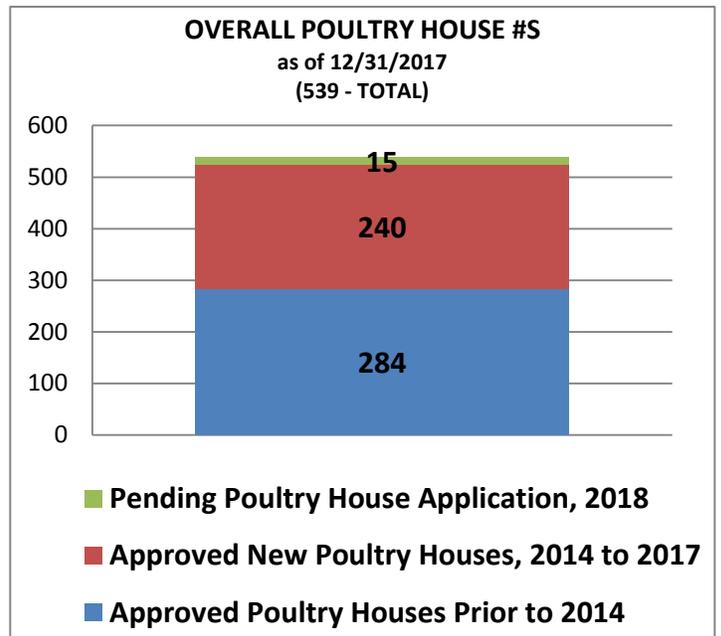
# MAP OF POULTRY HOUSE PERMITS

## Poultry House Location and Status - 12/31/2017



## POULTRY HOUSE PERMITS

Starting in July 1, 2014 thru December 30, 2017, the County received 30 zoning permit applications for poultry houses. Each application was requesting a specific number of poultry houses based upon density, acreage, and setback requirements according to the County's zoning ordinance, which ranged from a minimum of 2 poultry houses up to a maximum of 12 poultry houses per zoning permit application. The chart to the right details the # of poultry houses in existence prior to 2014 which was collected from the Assessors' records, the # of poultry houses applied and approved by the County between July 1, 2014 thru December 31, 2017, and the # of poultry houses applied but have not been approved by the County and are classified as pending applications.

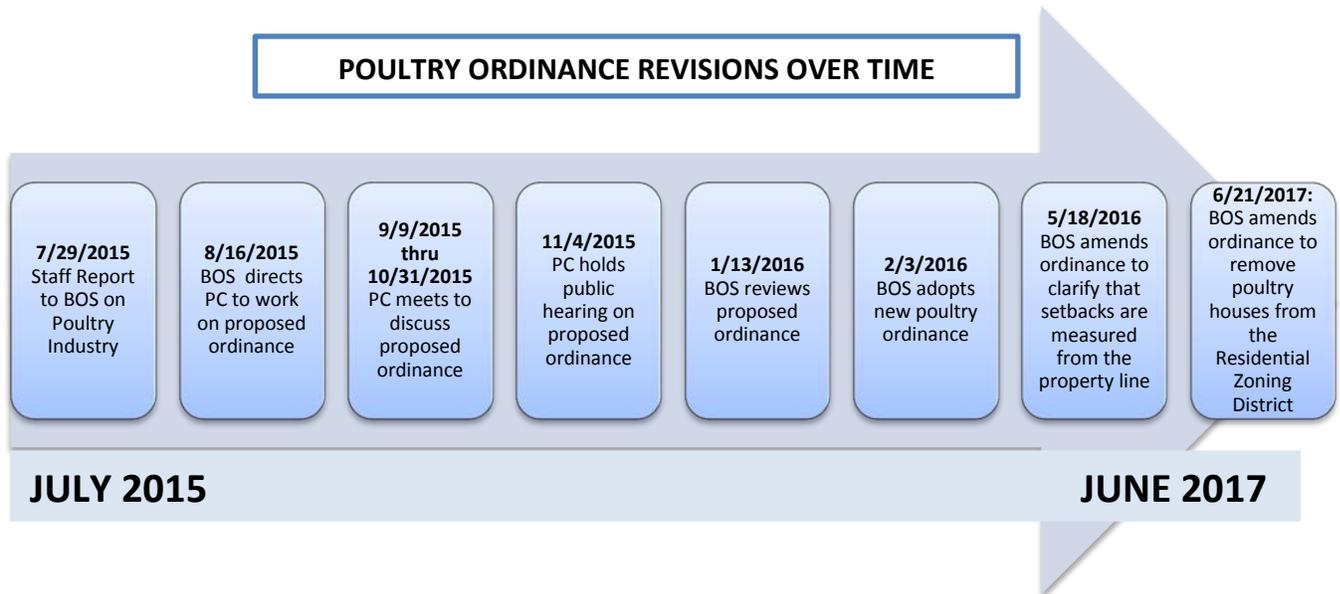


## BACKGROUND OF ORDINANCE & ACTION TIMELINE

In 2014 and 2015, there was a marked increase in the number of poultry house applications that were being received by the County. With this notable increase and the indications that this trend was going to continue, staff prepared a report for the Board of Supervisors' consideration ([July 29, 2015](#)). This report demonstrated that Accomack County and other localities on the Delmarva Peninsula were experiencing an increase in the number of poultry house applications. After reviewing the report's contents in August 2015, the Board of Supervisors directed the Planning Commission and staff to review the current Poultry Ordinance, review poultry ordinances throughout Delmarva, and address citizen concerns with existing poultry houses.

The Board of Supervisors at its September 16, 2015 meeting further clarified its earlier action and directed the Planning Commission to provide input to the Board on items raised by the public. In addressing the concerns raised by citizens, the Planning Commission spent a significant number of meetings investigating, discussing and hearing from subject experts on a wide range of topics (poultry litter management, litter shed fires, groundwater usage, public health concerns and avian influenza), and understanding regulations and practices. Eight (8) meetings were held between September 2015 to January 2016 to discuss poultry related matters by the Planning Commission and staff with an average of two and a half (2 ½) hours of work per meeting by the Planning Commission and a substantial amount of staffs' time on gathering and preparing information for consideration. Dr. Matson, Eastern Shore Health District Director, provided a host of information that helped inform key components of the proposed ordinance – his presentation is included as Exhibit A.

The Planning Commission convened a public hearing on November 4, 2015 on a proposed poultry ordinance that incorporated the comments and concerns received by the County over the prior year that addressed density requirements, landscape/buffer requirements, maximum limit of poultry houses per parcel, separation distances. The Planning Commission forwarded this proposed ordinance to the Board of Supervisors with a favorable recommendation and the Board of Supervisors, following a public hearing on February 3, 2016, adopted the proposed ordinance. The Board of Supervisors has made two amendments to the poultry ordinance since its adoption to clarify that setbacks are measured from the property line and not from any structure as well as to remove poultry houses as a use in the Residential Zoning District. In Exhibit B, there is a full listing of the web links to the referenced meetings' minutes.



There were significant revisions to the ordinance; the most topical ones are detailed below in the comparison chart.

<b>Poultry Ordinance Changes Chart</b>	
<b>Created on December 1, 2015</b>	
<b>Old Ordinance</b>	<b>Ordinance Adopted 2/3/2016</b>
No Landscape Plan Required	Landscape Plan Required
No Density Requirements	Overall Density - 1 house per 5 acres
No Maximum Limit - Number of Houses	Maximum limit of 12 houses per parcel
No Minimum Separation Distance	Minimum Separation between operations is 400 feet
300 foot Setback from existing dwelling/400 feet on tunnel end - with allowance for reduction by adjacent property owner	500 foot Setback from existing dwelling/ 600 feet on sides with tunnel fans - No allowance for reduction
<b>Old Ordinance</b>	<b>Ordinance Adopted 2/3/2016</b>

This provision was further amended on 5/18/2016 – see chart below

500 foot Setback from schools, churches, nursing homes, day care centers, campgrounds, public recreation areas, and public wells. <i>No exception for tunnel fans</i>	500 foot Setback from schools, churches, nursing homes, day care centers, campgrounds, public recreation areas, and public wells. <i>600 feet on sides with tunnel fans</i>
In AG & General Business Zoning Districts: 400 feet from incorporated towns, or Res Zoning District boundaries, subdivisions of 10 or more lots ( <i>No reference to improved</i> ), and mobile home parks or travel trailer parks. <i>No exception for tunnel fans.</i>	In AG & General Business Zoning Districts: 500 feet from incorporated towns, or Res Zoning District boundaries, <i>improved</i> subdivisions of 10 or more lots, and mobile home parks or travel trailer parks. <i>600 feet on sides with tunnel fans.</i>
In Residential Zoning Districts: 400 feet from incorporated towns, subdivisions of 10 or more lots ( <i>No reference to improved</i> ), and mobile home parks or travel trailer parks. <i>No exception for tunnel fans.</i>	In Residential Zoning Districts: 500 feet from incorporated towns, <i>improved</i> subdivisions of 10 or more lots, and mobile home parks or travel trailer parks. <i>600 feet on sides with tunnel fans.</i>
No provision for unimproved subdivisions.	In AG, Res & General Business Zoning Districts: 400 feet from <i>unimproved subdivisions</i> of 10 or more lots.
No provision for Earthen Berms	Earthen Berms may be required
No Landscape Buffer Provision	Landscape Buffer Provision: 3 Rows of plant materials on all sides; installed according to best management practices with maintenance required.
No provision for Traffic Safety and Existing Road Conditions	Provision for Traffic Safety and Existing Road Conditions

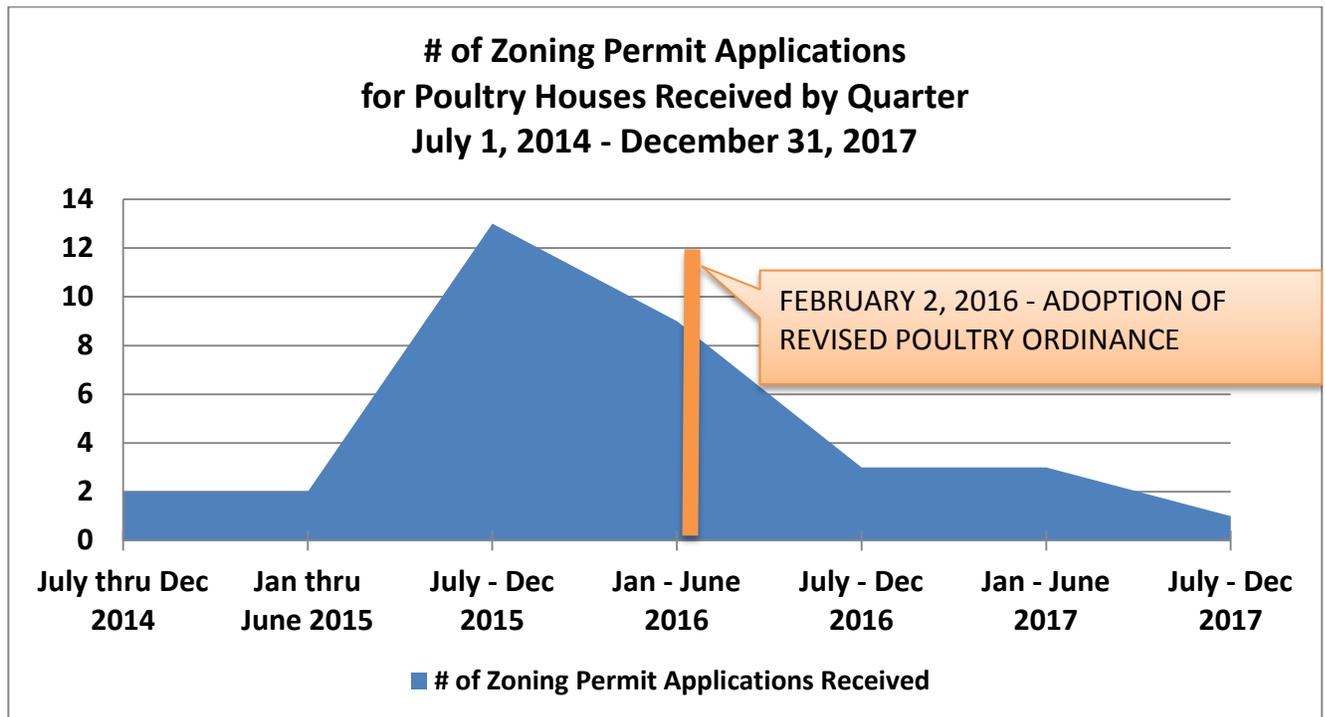
These provisions were further amended by removing Residential Districts on 6/21/2016 – see chart below

<b>Amendments to Poultry Ordinance Since February 3, 2016</b>	
	<b>Ordinance Amendment Adopted 5/18/2016</b>
Setbacks are measured from structures.	Setbacks be measured from the property lines, not structures, where schools, churches, nursing homes, day care centers, campgrounds, public recreation areas, and public wells were concerned
	<b>Ordinance Amendment Adopted 6/21/2017</b>
Poultry houses may be placed in the Residential Zoning District through a Special Use Permit.	Remove the placement of poultry houses from the Residential Zoning District



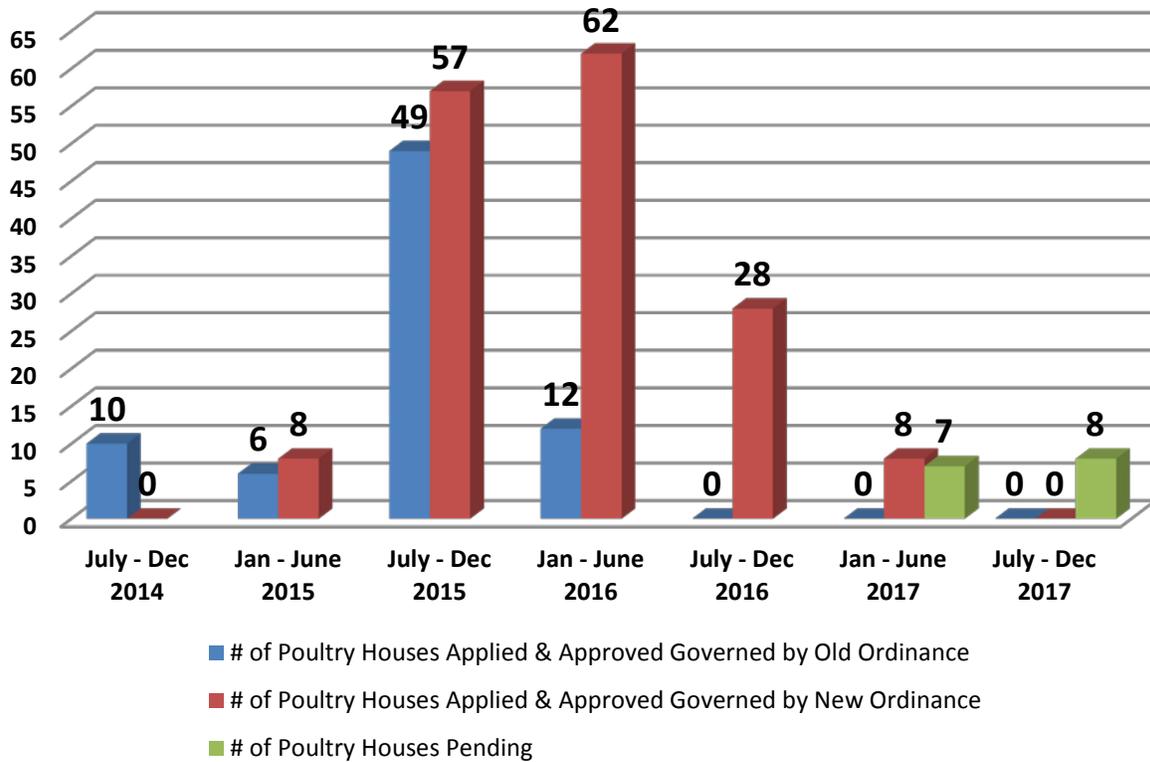
## ZONING PERMIT APPLICATIONS RECEIVED

When you examine the timeframe when poultry house applications were received in comparison to the work that was underway by the Planning Commission and the Board of Supervisors to strengthen the zoning ordinance, you can see how quickly the County responded and how the # of applications dropped substantially after the adoption of the new ordinance.



Even though applications were received prior to the new ordinance adoption date of February 3, 2016, it was determined that some of these applications were deemed deficient in their application submittal and therefore, not governed by the old ordinance, and were required to be evaluated and comply with the new ordinance requirements and standards. The graph below captures the total # of poultry houses contained in each application received and approved during the specified time frames and whether their application review was conducted according to the old or the recently adopted ordinance. Therefore, 77 poultry houses were approved under the old ordinance; 163 poultry houses were approved under the new ordinance; and 15 poultry houses are pending approval under the new ordinance.

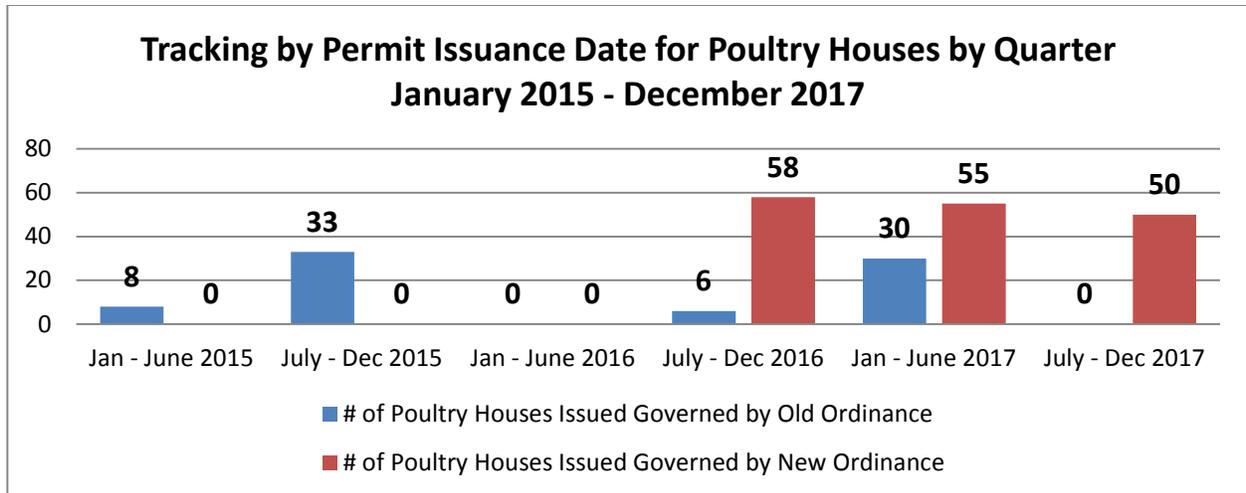
## July 2014 thru December 2017 Tracking of Status of Application for Poultry Houses



During the time frame referenced in the chart above, the County has also tracked one other category of permit status that is not reflected within the count provided in the chart above: the status of inactive permits. Below is detailed information on the three categories of permit status: 1) Applied & Approved Applications for Poultry House, regardless of whether it is governed by the old ordinance or the new ordinance; 2) Pending Applications for Poultry Houses; and 3) Inactive Applications for Poultry Houses.

### Approved Applications for Poultry Houses

The County received 30 zoning permit applications for poultry houses between July 1, 2014 through December 31, 2017, which were reviewed, processed and approved as detailed above. Since the new ordinance had many more site plan requirements, particularly the environmental regulations concerning stormwater, there was a considerable delay from when zoning permit applications were filed versus when the County approved and issued the zoning permit while the County staff worked with the applicants and their engineers to bring the application into compliance with the County ordinance and other state laws and regulations. This is illustrated in the chart below.



**Pending Applications for Poultry Houses**

The County received a total of three applications (one received each in the months of March, June and December 2017) that, as of December 31, 2017, had not been granted approval by the County; however, the applicants are actively working to address any comments generated by staff review. These three pending applications cumulatively total fifteen (15) poultry houses. It is anticipated that these three applicants will be resolved some time during 2018. Two applications are pending approval for the VPA and one is pending approval from VDOT.

**Inactive Applications for Poultry Houses**

As of December 31, 2017, the County is in receipt of 9 applications for poultry houses (totaling 60 poultry houses cumulatively) that were received as early as November 30, 2015 thru April 15, 2016 which have been classified as inactive. There has been no diligent pursuit of these applications by the applicant and the County has not been able to obtain a status of approval in compliance with the County ordinance. These 9 inactive applications have not been included in any of the counts listed above.

Due to the significant passage of time, correspondence has been sent to these 9 applicants notifying them that their applications are non-active and that they are being removed from consideration. Staff does not believe that any of these applications are going to move forward. In the unlikely event that the applicants wish to pursue approvals, new applications subject to current regulations will be required.

## GROUNDWATER WITHDRAWAL

There is a significant amount of new information on groundwater (well) withdrawals. Here is what we know:

- In the February 2016 Poultry Report, staff provided an estimate of poultry water consumption (drinking water) at 129,000 gallons per house for a flock (7 weeks). Based on actual use data shared with staff and information provided to the Virginia Department of Environmental Quality (DEQ) the 129,000 gallon per month estimate is solid **and has been confirmed by actual metered use data.**
- Importantly, although consumption information was provided in late 2015 and included in the 2016 report, the amount of cooling water needed was not understood and was not included in the report. The cooling water needs require significant amounts of water in the warm months (5 months a year). There are conflicting numbers about the amount of water needed for cooling water. **No actual local metered data is available.** At the writing of this report, cooling water estimates are all over the board, including a 3.1 million gallon per day withdraw number that has been represented as an actual water usage number.
- On February 21, 2018, Tyson representatives announced their intention to draw cooling water from the upper Columbia aquifer. This is a significant announcement. Cooling water had been planned to be pulled from the lower aquifer along with consumption water.
- To better understand water consumption and cooling water requirement on a monthly per house basis, the **estimates prepared by staff are** offered:

### Consumption

129,000 gallons of **consumption** water needed per flock

5.5 flocks per year

$129,000 \times 5.5 = 709,500$  gallons per year per house

$709,500$  gallons per house per year /12 months = **59,125 gallons per month consumption**

### Low range cooling

$59,125$  (**consumption**)  $\times .20$  (current low end of cooling water range) =  $11,825$  gallons per month cooling water

$11,825 \times 12 = 141,900$  gallons per year of cooling water needed

$141,900 / 12 =$  **11,825 gallons per month low range cooling**

### Mid-range cooling ([University of Georgia report -2017, Volume 29, No. 1](#))

2.5 gallons per minute (summer cooling)

$2.5$  gallons per minute  $\times 60$  minutes/per hour =  $150$  gph

$150$  gph  $\times 12$  hours (maximum per day) =  $1800$  gpd

$1800$  gpd  $\times 30$  days (month) =  $54,000$  gpm

$54,000$  gpm  $\times 5$  warm months where cooling is needed =  $270,000$  gallons per year

$270,000$  gpy /12 = **22,500 gallons per month mid-range cooling**

High range cooling

7,500 gallons per day (cooling numbers circulating throughout community)

7,500 gpd x 30 days (month) = 225,000 gallons per month

225,000 gallons per month x 5 months where cooling is needed = 1,125,000 gallons per house/per year

1,125,000 gallons per year/ 12 months = **93,750 gallons per month high range cooling**

- To aid in understanding total water consumption and cooling per month per house the following estimates are provided:

**CONSUMPTION PLUS COOLING**  
**GALLONS PER MONTH PER HOUSE**

**59,125 + 11,825 = 70,950 GPM/PER POULTRY HOUSE – Low Range**  
**59,125 + 22,500 = 81,625 GPM/PER POULTRY HOUSE – Mid Range**  
**59,125 + 93,750 = 152,875 GPM/PER POULTRY HOUSE – High Range**

- To extrapolate further, the following estimates are provided for the total water consumption and cooling per year per house:

**CONSUMPTION PLUS COOLING**  
**GALLONS PER YEAR PER HOUSE**

**70,950 GPM/PER POULTRY HOUSE x 12 months = 851,400 gallons – Low Range**  
**81,625 GPM/PER POULTRY HOUSE x 12 months = 979,500 gallons – Mid Range**  
**152,875 GPM/PER POULTRY HOUSE x 12 months = 1,834,500 gallons – High Range**

The Virginia Department of Environmental Quality has estimated that the total water demand for water (consumption & cooling) for **all confined poultry operations that have a Virginia Pollution abatement permit (which includes pre-2014 farms, new (2014 to present) in production and those under construction) to be 3.1 million gallons per day**. This estimate has been circulated widely throughout the community and has caused concern. Staff has talked with the DEQ several times about this estimate, and has been assured by DEQ staff that it is a preliminary estimate that covers a worst case scenario. It is critically important to understand that this estimate is based on a small data set that was part of a permit application. The estimate is a worst case scenario and not reflective of daily or annual actual use.

While there is a significant range between the low and high total water usage figures, the recent announcement by Tyson that it will be working with its affiliated poultry house owners to draw from the Columbia aquifer for cooling usage where possible, the groundwater withdrawal numbers are not nearly as concerning as previously believed.

**A meeting was held on March 15, 2018 between the Virginia Department of Environmental Quality and the poultry industry and an agreement was reached between these parties as to how to calculate the water usage for a Groundwater Withdrawal Permit. This information is included as Exhibit E.**

## PLANNING COMMISSION SITE VISIT & COMMENTS

On March 5, 2018, the Planning Commission and staff visited 5 sites to conduct a visual inspection from the roadside to observe buffers, stormwater measures, status of construction, location of blower fans, and proximity of other structures. The five locations were:

- Summer's Rest at 31109 Seaside Road
- Hai Tran Farm at 30490 Seaside Road
- Seaside Farm at 36558 Seaside Road – Belle Haven
- Guise Farm at 16499 Pungoteague Road)
- Van Tran Farm at 17099 Pungoteague Road.

The Planning Commission discussed the site visit and the text of the draft 2018 Annual Poultry Report at their regular meeting on March 14, 2018 and offers the following comments:

- Buffers will need to be monitored to ensure compliance with the approved landscape plans for the post 2014 permitted poultry houses.
- ~~The ammonia discharge associated with poultry houses needs to be monitored and researched more thoroughly to ensure a reasonable standard is established under the federal laws governing this matter.~~ UPDATE: On March 23, 2018, the Consolidated Appropriations Act, 2018, (better known as the Omnibus Bill), was signed into law. The Omnibus Bill, specifically Title XI called the "Fair Agricultural Reporting Method Act" or FARM Act", exempts livestock farms from reporting "air emissions from animal waste at a farm," under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This law retains the status quo where farms, including poultry farms, do not have reporting requirements under CERCLA; the reporting requirements under a different federal law, the Emergency Planning and Community Right to Know Act (EPCRA) remain the same which requires emissions reporting to state and local emergency response agencies. This is detailed further in Exhibit I.
- The Virginia Pollution Abatement (VPA) reporting requirements should be re-iterated as part of this report and the County should work with the state agency to ensure they keep the County informed regarding the volume of litter generation from the poultry houses and how it is being disposed. In addition, the contact information for reporting litter concerns for the poultry houses should be included as part of this report and made available through the County's website. [This is now included as Exhibit F.]
- There is fragmented jurisdiction in the approval, monitoring and enforcement of the various elements of the permitting for poultry houses, which makes it difficult to evaluate if the permit is being adhered to and if there are problems that the County should be made aware of.
- The conversion of relatively level-graded land to a highly impervious, significantly altered land for this purpose may present challenges for future land re-use.

## **BUFFER DISCUSSION AND VISUAL OBSERVATIONS**

The inclusion of buffer requirements as a component of the Poultry Ordinance ([Accomack County Code 106-232](#)) is intended to address several concerns raised by the general public and to lessen the appearance and impacts to the neighboring properties. The ordinance requires a distance buffer, known as setbacks from the property line and from adjacent uses, and a landscape buffer employing a three staggered row approach of plant material of a leafy nature and of a specified grow height. The difference between the pre-2016 ordinance and the newly adopted (2/3/2016) ordinance are detailed in the Background Section on Page 18.

These buffers are meant to serve as a visual screen horizontally and vertically upon full plant maturity and may reduce any emission particulates from traversing off the property through the establishment of distance between the poultry house parcel and the surrounding area.

Each applicant is required to submit a landscaping plan as part of the site plan, which is reviewed and approved by the County. The County staff is in the process of conducting site visits to verify compliance with the site plan, including setbacks and buffers, and will be providing a more comprehensive listing for all poultry permits within the next three months. A representative sample is shown below of a landscaping site plan and how that translates to “on the ground”.

**Seaside Farm – Approved Landscape Plan**



**Buffer plantings at Seaside Farm as of 2/22/18**



The plantings that are currently in the ground and approved should be monitored to ensure successful survivability. Replacement plantings for deceased plantings should be installed as soon as possible in order to keep the plantings around the same size to maximize the success of the buffer. While we cannot predict how efficient these buffers are at the current time, it is recommended to visit these sites after several years to see how effective the county’s current landscaping requirement is.

## **ON-SITE HOUSING**

When the poultry ordinance was adopted on February 3, 2016, the County’s ordinance did not specifically address the inclusion of on-site housing for poultry attendant(s); however, when site

plans were forthcoming from the applicants that included a residential structure, the County stipulated that it would need to comply with the underlying zoning requirements for density of one house per confined poultry operation for this use. As of 12/31/2017, the County has permitted 7 residential houses for location on the poultry sites which are served by their own well, separate from any well associated with the poultry houses, and septic.

## **STORMWATER MANAGEMENT**

The Virginia Stormwater Management Program is managed by the Virginia Department of Environmental Quality and, since July of 2014, administered by Accomack County. [County Code Section 38 Article IV](#) outlines the program and requirements that pertain to all land disturbance projects, including the development of poultry farms. The purpose of this program is to protect the quality and quantity of state waters from the potential harm of unmanaged stormwater, including protection from a land-disturbing activity causing unreasonable degradation of properties, water quality, stream channels, and other natural resources.

This program includes a complex set of regulations and design guidelines aimed at managing stormwater and not increasing post-development runoff from pre-development conditions. Site design requires a series of stormwater best management practices (BMPs) that slow down and treat stormwater to specific parameters identified in the regulations. Plans and calculations must be prepared and submitted for approval that demonstrate compliance with the regulations. The County process includes a step that makes sure a zoning permit is not issued until the stormwater management plan has been approved.

**Each NEW poultry farm's stormwater management system has been designed to make sure that the peak flow rate leaving the developed site will be less than or equal to the peak flow rate in the pre-developed condition.**

Once approved, the owner of the property being developed must submit a performance bond, cash bond or letter of credit that ensures they will complete the project as designed. A stormwater management maintenance agreement is also required, and is filed in the courthouse to run with the property, even if the facility is sold to another operator.

During the course of construction, County inspectors visit each site frequently to determine if construction is proceeding as planned and to make sure that land disturbing operations are resulting in as little potential erosion and loss of sediment as possible. The site visit includes a comparison of the construction activities to the approved drawings in order to make sure that the stormwater management system is being constructed accordingly. The site visit also includes an assessment of whether the work is being accomplished in a manner that minimizes the chance of erosion or loss of sediment from the site.

These site visits are being performed by personnel who have been certified in stormwater management inspection and certified in erosion and sediment control inspection. Each site visit results in a written report that includes photographs, and a summary of the results of the inspection is relayed to the contractor on site. Any site deficiencies are pointed out and the

inspector and contractor confer to make sure that work can start on any needed improvements as soon as possible.

These site deficiencies are included in either a verbal or written corrective action directive. Some directives are simple in nature, such as repairing damaged sections of silt fence. Others are more intensive, such as cleaning out a silt trap or redesigning the BMP due to unanticipated field conditions. Generally, this is all that has been necessary to have the contractor return the project site into compliance.

The County issues formal Notices to Comply for all sites that do not follow the verbal or written directives in a timely manner. These include specific corrective actions that need to be completed within a specific time frame. Since January 2016, to date, there have been approximately 11 Notices to Comply issued to poultry construction sites.

The County issues Notices of Violation when Notices to Comply are ignored. Since January 2016, to date, there have been approximately 4 Notices of Violation issued to poultry construction sites.

If a Notice of Violation is ignored, the County begins the criminal court process to demand compliance, often including a fine. Only one poultry facility has required this process and the court case is pending.

Once complete, the stormwater management facilities are subject to a post-construction inspection program that includes a site visit to the BMPs once every five years. During the inspection, the stormwater management facilities are compared to the record drawings to make sure that no significant changes have been made and that the facilities are functioning as intended. Any identified deficiencies are noted and included in a report to the owner with a timeline for completing necessary improvements. To date, no new facilities have been inspected under the post-construction program.

Below is an example of stormwater management for one of the poultry houses:



1) Sheet flow from each roof into small grass channels



26

2) Sheet flow from grass channels into conveyance ditches



27

3) Shallow concentrated flow from conveyance ditches into sediment forebays



28

4) Sediment forebays overflow into Pond Best Management Practice (BMP)



29

5) Level 2 wet pond BMP flows from Cell #1 into Cell #2



30

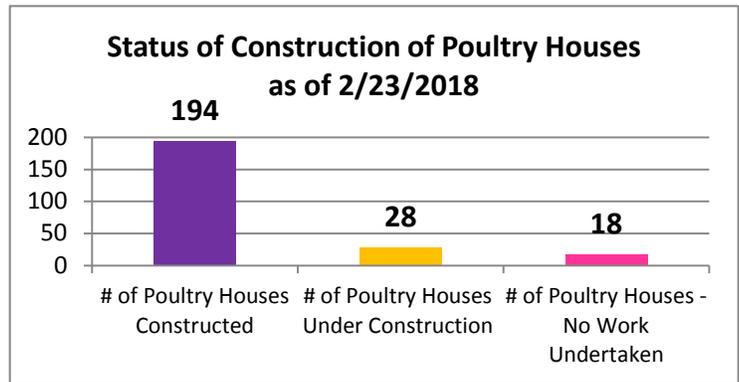
6) Wet pond BMP overflow discharge from site



31

## STATUS OF CONSTRUCTION OF POULTRY HOUSES

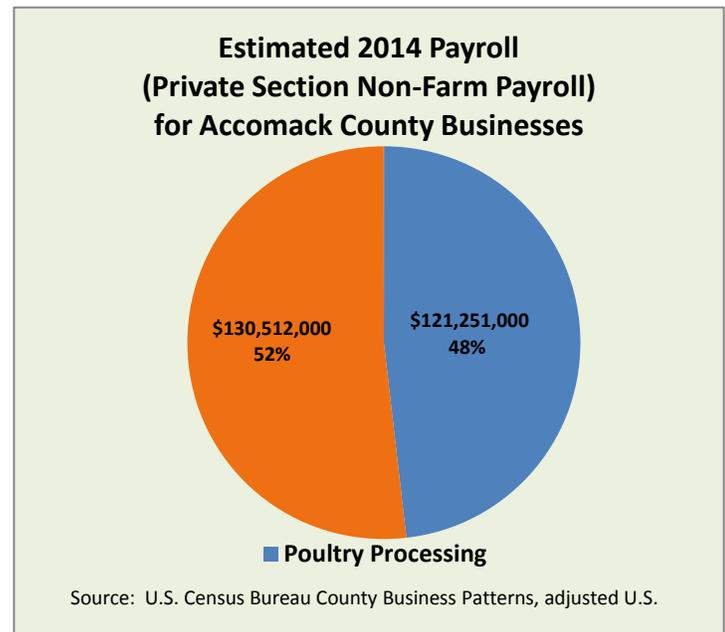
With the time delay between application received to zoning permit approved and issued, this has caused an impact on the timeframe for construction of these poultry houses. The majority of the poultry houses have now been constructed but there is a small component that is in mid-progress or has not commenced construction yet.



## ECONOMIC IMPACT

As a whole, the poultry industry in Accomack County contributes significantly to the economy of the county. According to the 2012 Census of Agriculture for Accomack County, the market value of poultry and their products is \$112,419,000 and ranks 4<sup>th</sup> in the state in poultry production; there are over 4,000 employment positions associated with the poultry industry. The 2017 Census of Agriculture is underway by the U.S. Department of Agriculture (USDA) and has not been released at the time of this report. It is quite likely that, with the addition of 240 poultry houses, our ranking in the state will rise.

Poultry has long been an important component in the County. The Perdue and Tyson Processing plants provide for 3000+ direct jobs. Growers and farm workers, truck drivers, grain elevators, and local grain farmers all benefit economically from poultry in the County.



As new poultry houses are constructed that comply with the requirements of the integrators with more sophisticated equipment and technology, the County is beginning to ascertain the impact on its tax rolls and how this may increase tax revenue for both real estate and personal property. Three parcels have been sampled to examine the tax impact.

Map & Parcel	2014 Tax Valuation	2016 Tax Valuation	Increase in Valuation	Increase in Local Real Estate Taxes
26-A-44 (Ish Farm LLC)	\$193,600	\$2,353,800	\$2,160,200	\$13,177
68-A-196 (Elahi LLC)	\$84,600	\$1,453,400	\$1,368,800	\$ 8,350
69-A-51 (Shore Livestock)	\$667,300	\$1,240,900	\$ 573,600	\$ 3,499

We are working with the Commissioner of Revenue's Office and the Assessors' Office to develop a full report on all of the poultry house permits issued and that have been constructed, as this relates to tax valuation. We will have a more complete report on this component for next year. To date, the County Assessor has not found a correlation between poultry houses and declining property assessments.

## **COMPLAINTS**

The County continues to receive general calls concerning the County's position on growth in the poultry industry, including concerning over its possible impact to the County's groundwater, Chesapeake Bay and its tributaries. The County responded to nine (9) Freedom of Information Act (FOIA) filings, seeking information on the applications received and status of said applications for poultry houses.

The County received three (3) specific, site-related complaints: two concerned stormwater management and were handled by the Environmental Compliance Division and one concerned the status of buffer installation which is not required until the poultry houses are constructed.

The Building Department staff has taken enforcement action at several sites for work without proper permits.

## **DELMARVA LAND & LITTER UPDATE**

The Delmarva Land & Litter Challenge (DLLC), formed in 2015 with participation from the Delmarva poultry industry, the agricultural community, environmental groups, regulatory agencies, and academic organizations, is tasked with developing new approaches to effectively tackle poultry litter challenges and to identify ways to protect the peninsula's waterways.

DLLC has been studying the poultry litter transport programs and have developed a model program. Their model program includes components that (1) eliminate duplicative enforcement or oversight provisions within state cost-share transport programs; (2) encourage farmers to use available programs and create new record-keeping systems to identify eligible participants.

This [model program report](#) has been shared with state officials in Virginia, as well as Delaware and Maryland. DLLC is currently working on the development of a nutrient budget for Delmarva through its Mass Balance Assessment. One of the initial objectives for quantifying the amount of poultry litter produced on Delmarva was to support an evaluation of its potential for alternative uses. The work is expected to identify whether counties in our region have a general surplus or deficit of nitrogen or phosphorus relative to crop needs to guide nutrient applications, including the use of poultry litter as a fertilizer.

In 2016, the Virginia Institute of Marine Science – Eastern Shore Lab (VIMS ESL) and the VA Tech Agricultural Research Extension Center (VA AREC) received funding to conduct a study entitled "Poultry Expansion on the Eastern Shore of Virginia: A Public Education Project on Regional Poultry Impacts". Said project is to address the nutrient mass balance modeled after work

completed in Delaware regarding nutrient imports and exports; study the potential nitrogen and phosphorus loading to waterways from various production components; review emerging technologies to assist with nutrient handling; and other issues that may be relevant to this topic.

It was anticipated that this report would be available at this point; however, due to delays in the project from Delaware regarding its Mass Balance Assessment which is needed data to assist in this report, no new timetable has been released as to when this report will be available.

## **POULTRY FIRES**

Poultry litter shed fires occur on an occasional basis throughout the County, and typically are handled by the growers themselves. Fire companies are occasionally called to attend some of the litter fires.

Per Director of Public Safety C. Ray Pruitt, there were six (6) Incidents of fires that occurred and were reported on parcels identified as poultry farm(s) for calendar year 2017. Of that, one Poultry House in Melfa burned down and one Manure Shed in Parksley burned down.

## **AVIAN INFLUENZA & OTHER HEALTH RELATED ITEMS**

The Virginia Department of Agriculture and Consumer Services (VDACS) have protocols in place in the event of an outbreak. Following an outbreak of Low Pathogenic Avian Influenza (LPAI) in the Shenandoah Valley during 2002, the Virginia Poultry Federation worked with local, state, and federal government agencies to form the Virginia Poultry Disease Task Force (VPDTF). The VPDTF developed a prevention and rapid response plan for LPAI in Virginia, which contains biosecurity and AI surveillance protocols for commercial flocks and procedures to follow in the event of an outbreak. Following the 2002 LPAI outbreak, the USDA Animal and Plant Health Inspection Service (APHIS) developed federal regulations establishing a national LPAI program, and Virginia's response plan became somewhat of a model for state plans that have been adopted across the country. The VPDTF, which consists of poultry industry and relevant government agency representatives, such as the Virginia State Veterinarian and APHIS veterinary officials, meets at least quarterly to review and update Virginia's plan. VPDTF also periodically conducts tabletop exercises to test the effectiveness of our plan.

The Eastern Shore of Virginia poultry producers also work closely with poultry producers throughout the eastern shore of Maryland and Delaware. The Delmarva Avian Influenza Task Force was formed to assist the Eastern Shore region of Delmarva. The VA Response Plan notes that poultry producers and operations on Virginia's Eastern Shore may be managed in the event of an AI outbreak according to the Maryland and Delaware Initial State Response and Containment Plan (ISRCP), as those operations are routinely more closely associated with the Delmarva poultry industry.

It is important to note that studies indicate that avian influenza viruses have a seasonal pattern related to colder weather, similar to the influenza patterns for humans and its increase in colder weather months. In the United States in 2017, there was one outbreak of Highly Pathogenic Avian Influenza (HPAI) in Tennessee where 700 poultry birds died and the remaining flock of

73,300 were killed as a preventative measure; there was two outbreaks of Low pathogenic Avian Influenza (LPAI) – one in Tennessee that resulted in the preventative killing of the entire poultry flock of 16,500 and one in Wisconsin that resulted in the preventative killing of the entire turkey flock of 84,000.

The World Animal Health Information Database is a great resource for monitoring and receiving information regarding any outbreaks of avian influenza in the United States, as well as the world. It can be accessed at: [http://www.oie.int/wahis\\_2/public/wahid.php/Wahidhome/Home](http://www.oie.int/wahis_2/public/wahid.php/Wahidhome/Home)

Additional information relative to other health related items was reported in depth at the 2016 Planning Commission meeting and is attached as Exhibit A.

U.S. Department of Agriculture (USDA) and the Centers for Disease Control (CDC) maintain extensive information and statistics on avian influenza which are listed below and the Virginia Department of Health (VDH) produces annual reports by disease and locality for a variety of health issues, including the communicable diseases of campylobacteriosis and salmonella which were extensively discussed in 2016 and included in Exhibit A.

<https://www.usda.gov/topics/animals/one-health/avian-influenza>

<https://www.cdc.gov/flu/avianflu/avian-flu-summary.htm>

<http://www.vdh.virginia.gov/data/communicable-diseases/>

## FUTURE CONSIDERATIONS/ ITEMS TO MONITOR

There are additional items that the County will need to monitor legislatively and regulatory to determine how it impacts poultry operations and whether further changes to the county's poultry ordinance are necessary for the health, welfare and safety of its residents.

### A.) Ammonia Discharge & Airborne Particulates

Two items that have been raised concern the levels of ammonia discharge associated with Confined Animal Feeding Operations (CAFOs) and the levels of airborne particulates that are released with these operations and what impact they may have to the adjoining properties. These items are overseen by the U.S. Environmental Protection Agency (EPA).

In 2008, EPA exempted most farms from requirements to report releases of hazardous substances from animal waste to the federal government under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Soon after the final rule was issued a lawsuit challenging the rule was filed. On **April 11, 2017**, the rule was struck down and the reporting exemption for farms was eliminated. However, the EPA requested the court to delay the implementation deadline and was granted approval that this mandate will not be enforced until **May 1, 2018**. This means that farms with continuous air releases do not have to make their initial continuous release notification under CERCLA until **May 1, 2018**.

- After this draft report was released for review by the Planning Commission, federal legislation was passed that made the following sections no longer valid and we have struck through that text and provide the following update: On March 23, 2018, the Consolidated Appropriations Act, 2018, (better known as the Omnibus Bill), was signed into law. The Omnibus Bill, specifically Title XI called the "Fair Agricultural Reporting Method Act" or FARM Act", exempts livestock farms from reporting "air emissions from animal waste at a farm," under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This law retains the status quo where farms, including poultry farms, do not have reporting requirements under CERCLA; the reporting requirements under a different federal law, the Emergency Planning and Community Right to Know Act (EPCRA) remain the same which requires emissions reporting to state and local emergency response agencies. This is detailed further in Exhibit I.

~~What does this mean for the poultry CAFOs in Accomack County? All farms, including poultry farms, will be required to report releases of a hazardous substance that exceeds a reportable quantity within a 24-hour period and the reporting will need to include hazardous substance air releases from animal waste. Ammonia and hydrogen sulfide are common hazardous substances emitted from animal waste that require reporting if released to the air in amounts greater than or equal to the reportable quantity of 100 lbs. within a 24-hour period. If the farm releases any other hazardous substances above their designated reportable quantities within a 24-hour period, that will need to be reported as well. The full list of CERCLA hazardous substances can be found~~

at: ~~<https://www.epa.gov/epcra/cercla-and-epcra-reporting-requirements-air-releases-hazardous-substances-animal-waste-farms#Resources>~~.

~~Most of the poultry CAFOs will be treated as a continuous release under CERCLA and will need to (1) notify the National Response Center (NRC) to classify as a continuous release notification, (2) submit an initial written notification to the U.S. Environmental Protection Agency Region 3 Office, ATTN: Anne Gilley with Postal Code 3HS61 at 1650 Arch Street, Philadelphia, PA 19103-2029, and (3) a one-time first anniversary follow-up report to the EPA Region 3.~~

~~The EPA has issued guidance and has been working through the USDA and industry resources to inform the entities that now will be required to report under CERCLA Section 103.~~

There is another federal statute that requires the reporting of releases of hazardous substance that exceeds a reportable quantity within a 24-hour period and it is the Emergency Planning and Community Right-to-Know Act (EPCRA). However, this statute stated that large CAFOs are required to report releases of ammonia and hydrogen sulfide to state and local government under EPCRA Section 304. In October 2017, the EPA has determined that this statute excludes farms that use substances in routine agricultural operations from reporting under EPCRA section 304. In addition, the normal application of fertilizers and pesticides should also not be reported under EPCRA because they are exempt, except for spills or accidents that release hazardous substances in excess of applicable Reporting Quantities. Under this interpretation of the law, there is no need for farms to report air releases of hazardous substances from animal waste to State and local government at this time. A lawsuit has been filed challenging this interpretation of the EPCRA statute. The County will need to monitor the status of the EPCRA statute and any guidance or regulatory rules that are issued from EPA to determine if the poultry operations will be required to provide annual reporting on these issues.

## **B.) Groundwater Withdrawal Permits – Source of Withdrawal**

The County should work with its legislators to change the state regulations that address water withdrawals as they relate to the Eastern Shore of Virginia Groundwater Management Area and to allow for flexibility of withdrawal from the various aquifers (Columbia, Yorktown, etc.) based upon the type and intent of usage and to review and improve the processing involving in applying for and receiving these water withdrawal permits, especially if the water is to be used for only cooling poultry.

## **C.) Good Agricultural Practices (GAP) and Good Handling Practices (GHP) Programs**

The United States Department of Agriculture (USDA) oversees a voluntary Good Agricultural Practices (GAP) and Good Handling Practices (GHP) program and offers training and voluntary audits to verify that fruits and vegetables are being handled from farm to table as safely as possible.

The County will need to work closely with its agricultural partners and businesses that grow and harvest crops for human consumption to ensure that the location of poultry operations are conducted and managed so that the food-related crop fields are not impacted by the poultry operations or vice-versa and that their crop operations are being produced, packed, handled and stored as safely as possible to minimize risks of microbial food safety hazards. The County should work with Farm Bureau to ensure access to these programs and its associated trainings are offered to crop farmers as well as to any poultry operations that are adjacent to crop fields.

#### **D.) Buffer Effectiveness**

The County will need to continue to observe and monitor compliance with the approved landscaping plans and enforce compliance, as needed. The County may want to consider some amendments to the ordinance as it relates to the buffers and landscaping if it finds that the buffers are not addressing the issues intended.

For example, a 2007 report from the United States Department of Agriculture suggests that the odor plume from poultry houses typically travels downwind, along the ground, in a concentrated plume. One possible consideration for an updated ordinance would be the addition of berms around the either the perimeter of the property or on the windward side of the property with the landscaping planted on the berm. The idea of the raised planted berm is to slow the motion of the plume before it reaches the planting to give the plantings more time to absorb the ammonia. Therefore, if the staggered three-row bush/tree approach as detailed in the County ordinance does not mitigate odors as intended, then this might be an alternative to consider for future applications for poultry houses.

The County may wish to include a provision in the ordinance regarding landscaping bonds or letters of credit to ensure that the applicants will maintain the buffer for a period of time. Ideally, staff could hold the financial surety for a two year period to ensure successful buffers.

#### **E.) Effect on Real Estate Values**

Work with the Commissioner of Revenue's Office and the Assessors' Office to develop a full report on all of the poultry house permits issued and that have been constructed, as this relates to tax valuation.

#### **F.) Stormwater Management Designs**

Work with applicants and their engineers to ensure that stormwater management designs retain the stormwater generated from the site on the site.

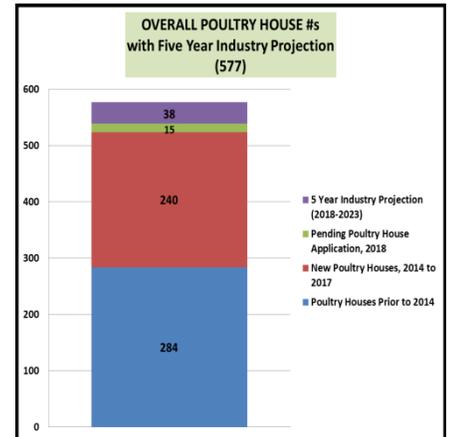
#### **G.) Groundwater withdrawal**

Work with the poultry house operators to obtain actual usage data and refine the water usage numbers from estimates/projections to actual water usage for both cooling and consumption. Work with state officials to verify usage numbers and reflect groundwater withdrawal usage accurately in all publications, reports, resources, websites, etc.

## H.) Five Year Industry Projection for Poultry Houses

The 4 integrators were contacted to request their five-year industry projection for new poultry houses and all responded with the exception of Amick.

The County will need to track if these projections are accurate at the conclusion of the five-year projection period in 2023.



## **EXHIBIT A: Presentation on Health Related Issues associated with Poultry Industry**

### ***From the 2016 Planning Commission Annual Poultry Report***

In 2016, the Planning Commission heard from a wide range of subject experts on health related issues associated with the poultry industry, including the State Veterinarian - Virginia Department of Agriculture and Consumer Services, Accomack County Department of Health, Virginia Health Department - Dr. David Matson, Accomack County Public Safety - C. Ray Pruitt, Delmarva Poultry Industry, Inc. - Bill Satterfield, Tyson Foods - Jarrod Goodman and Ronnie Watkins.

Accomack County works with the U.S. Department of Agriculture, Delmarva Poultry Industry, Inc. and Virginia Poultry Alliance on the emergency response plan in the event of an avian influenza outbreak. Currently, the plan in place for Accomack County includes the Department of Public Safety, the Sheriff's Office, the integrators (the poultry companies), and the Community Emergency Response Team (CERT). In the event of an outbreak, mandatory reporting to the Department of Health occurs, the infecting strain is characterized, exposed persons and other animals are assessed for risk and for infection and illness, the County is alerted, all traffic in the area is stopped, the property is isolated, all houses are foamed, and chickens are run through two (2) heat cycles to compost them for removal. This is a twenty-four hour process at a minimum.

The State Veterinarian provided information on Virginia's "Initial State Response and Containment Plan" which is a document that relates to the surveillance and handling of poultry flocks infected avian influenza – this gives direction and protocol in the event of an outbreak of avian influenza in bird populations. The state plan is available at <http://www.vdacs.virginia.gov/pdf/avianva.pdf>.

Dr. David Matson, Director Eastern Shore Health District, Virginia State Health Department, explained to the Planning Commission (in summary) that the avian influenza strains have different levels of pathogenicity, and that both birds and humans are susceptible to different versions. For example, one strain may be highly pathogenic to birds but have no impact on humans. Conversely, the Mexican strain known as 'H1N1' was pathogenic for humans, yet not pathogenic to animals.

Dr. Matson also informed the Planning Commission that a prudent planner plans for future avian influenza incidents and that the Delmarva Avian Influenza Task Force exists for that purpose (which has been meeting, and continues to meet on a regular basis).

**The Planning Commission was informed by public health officials that there is a noted occupational concern for those persons working and living on the premises of poultry operations** (which are covered by VA Department of Labor and Industry – Virginia Occupational Safety and Health (VOSH). Poultry growers that spoke to the Planning Commission do not seem overly concerned with the occupational health risks. **There is no known immediate threat to the health of the public at-large by poultry operations at this time.**

Of the health concerns noted (Campylobacter, Salmonella, MRSA and Asthma); poultry operations are a continual source of Campylobacter and Salmonella risk. Poultry operations are also a source of dust, ammonia, and odor that can be noxious or harmful. **Overall, more confined poultry feeding operations create more population risk, yet the degree by which they do so is unclear.** With the growth of the number of confined poultry operations in the County, monitoring will be needed.

*\*It was noted poultry related diseases that persons may be exposed to are Campylobacter (at a rate of 9 cases in Accomack County last year for every 50,000 persons), Salmonella (at a rate of 27 cases in Accomack County last year for every 50,000 persons), Avian Influenza (see page 8), Methicillin – Resistant Staphylococcus Aureus (MRSA) (as one study of veterinarians working with poultry and other domesticated animals suggests as well as another study of industrial livestock swine and poultry operation workers), and asthma (as triggered by mold, animal dander and dust).* PLEASE NOTE – NEW 2016 INFORMATION: According to the Virginia Department of Health for 2016, the County’s population was 32,973 and there were 17 reported cases of Campylobacteriosis which translates to a rate of 51.6 cases per 100,000 and there were 17 reported cases of Salmonellosis which translates to a rate of 51.6 cases per 100,000.

As noted by Dr. Matson: “A general principle of exposure is that decreased contact with a material of risk reduces the probability of an adverse outcome.” **There is a noteworthy reduction in asthmatic triggers (i.e. mold, animal dander and dust) over distance (setbacks). The effects of this reduction have diminishing returns after 600 feet, the further one moves from the source. The addition of a vegetative buffer contributes further to a reduction in asthmatic triggers by an additional 50%.** Increased setbacks and buffer requirements were included in the Planning Commission’s recommended Poultry Ordinance amendment and subsequently adopted by the Board of Supervisors.

Dr. Matson reviewed and addressed the contents of the letter prepared by researchers from John’s Hopkins Center for a Livable Future at Bloomberg School of Public Health and the letter prepared by Dr. Richard Raymond, former U.S. Undersecretary of Agriculture for Food Safety. Of the health concerns noted (Campylobacter, Salmonella, MRSA and Asthma); confined poultry feeding operations can be a point source. With the growth of the number of confined poultry operations in the County, monitoring will be needed.

Poultry are known and frequent carriers of Salmonella and Campylobacter. Concentrations of poultry increase exposure to these bacteria, both at the feeding operation and at the processing plant. The industry, and two regulating or supervising agencies, VDACS and DEQ, are aware of these issues, as is industry. The risk to the public is increased, but what level of risk increase will occur is not known at this time. The landscape plan requirement, setbacks and vegetation buffers reduce the increased risk.

The two most frequent microorganisms of concern for poultry exposure are Campylobacter and Salmonella. The Eastern Shore of Virginia trends year-by-year at a higher rate of Salmonella occurrence than the rest of the Commonwealth. The source of increased occurrence of

Salmonella in the County is not known. Campylobacter reports within the Eastern Shore of Virginia occur at a rate similar to that of the rest of the Commonwealth.

In terms of occupational hazards, the integrators have their own occupational health expertise in addition to that provided by Virginia Occupational Safety and Health (VOSH). The diseases of greatest concern for workers and those living on the premises would be related to the concentration of birds and the feces they produce: chemicals that burn the lung, such as ammonia, leading to chronic lung disease and susceptibility to lung infection; increased exposure to dust particles = animal dander, with, thus, increased rate of obstructive lung disease, such as asthma; and need for oxygen supplementation.

Virginia Department of Agriculture and Consumer Services (VDACS) and Virginia Department of Environmental Quality (DEQ) are the two (2) State agencies that have precedence and authority when there is not a known human disease occurring from an animal interaction (i.e. applicable to animals only).

*The following people provided information to the Planning Commission on public health: Mr. Bill Satterfield, Director of Delmarva Poultry Industry (DPI), Inc., Mr. Dave Lovell, local grower, Dr. Don Hopson, Regional State Veterinary Supervisor, Virginia Department of Agriculture and Consumer Services (VDACS), Dr. David, Matson, Director Eastern Shore Health District, Virginia State Health Department, Ms. Anne Godwin, Pat and Donald Parish, Ms. Eileen Kirkwood, Ms. Miriam Riggs, Mr. Jay Ford, Director Virginia Eastern Shorekeeper, Mr. Joe Valentine, Mr. David Fick, Mr. Ken Shultz, and Mr. Bob Meyers.*

## EXHIBIT B: Reference Materials for Poultry Ordinance Adoption

Web links to all meeting minutes, materials

[https://www.boarddocs.com/va/coa/Board.nsf/files/9ZCTUH791015/\\$file/2015.08.05%20BOS%20Poultry%20Report%20PACKET.pdf](https://www.boarddocs.com/va/coa/Board.nsf/files/9ZCTUH791015/$file/2015.08.05%20BOS%20Poultry%20Report%20PACKET.pdf)

[https://www.boarddocs.com/va/coa/Board.nsf/files/A47T4E5E4090/\\$file/%5B0%5D%202015.11.09%20Proposed%20Poultry%20Ordinance%20Amendment%20Memo.pdf](https://www.boarddocs.com/va/coa/Board.nsf/files/A47T4E5E4090/$file/%5B0%5D%202015.11.09%20Proposed%20Poultry%20Ordinance%20Amendment%20Memo.pdf)

[https://www.boarddocs.com/va/coa/Board.nsf/files/A5YJJ94D0F41/\\$file/2016.01.07%20BOS%20Poultry%20House%20Work%20Session%20PACKET.pdf](https://www.boarddocs.com/va/coa/Board.nsf/files/A5YJJ94D0F41/$file/2016.01.07%20BOS%20Poultry%20House%20Work%20Session%20PACKET.pdf)

[https://www.boarddocs.com/va/coa/Board.nsf/files/A6HT566E7E7E/\\$file/2016.01.11%20Economic%20Data%20Pertaining%20to%20Poultry%20PACKET.pdf](https://www.boarddocs.com/va/coa/Board.nsf/files/A6HT566E7E7E/$file/2016.01.11%20Economic%20Data%20Pertaining%20to%20Poultry%20PACKET.pdf)

[https://www.boarddocs.com/va/coa/Board.nsf/files/A6LQ8G5E08FA/\\$file/2016.02.03%20BOS%20Public%20Hearing%20Packet.pdf](https://www.boarddocs.com/va/coa/Board.nsf/files/A6LQ8G5E08FA/$file/2016.02.03%20BOS%20Public%20Hearing%20Packet.pdf)

[https://www.boarddocs.com/va/coa/Board.nsf/files/A8ZN3V510FAF/\\$file/2016.04.20%20BOS%20Poultry%20Ordinance%20Amendment%20Part%202%20\(Packet\).pdf](https://www.boarddocs.com/va/coa/Board.nsf/files/A8ZN3V510FAF/$file/2016.04.20%20BOS%20Poultry%20Ordinance%20Amendment%20Part%202%20(Packet).pdf)

[https://www.boarddocs.com/va/coa/Board.nsf/files/A72S9366E699/\\$file/2016.02.11%20BOS%20PC%20Report%20on%20Poultry%20Related%20Matters%20PACKET.pdf](https://www.boarddocs.com/va/coa/Board.nsf/files/A72S9366E699/$file/2016.02.11%20BOS%20PC%20Report%20on%20Poultry%20Related%20Matters%20PACKET.pdf)

[https://www.boarddocs.com/va/coa/Board.nsf/files/AJ8NBY5E2BA0/\\$file/Poultry%20Monitoring%20Packet.pdf](https://www.boarddocs.com/va/coa/Board.nsf/files/AJ8NBY5E2BA0/$file/Poultry%20Monitoring%20Packet.pdf)

[https://www.boarddocs.com/va/coa/Board.nsf/files/ALCHUP491974/\\$file/2017.04.19%20\(Packet\)%20Proposed%20Poultry%20Ordinance%20Amendment%20-%20Remo%20Residential%20and%20General%20Business.pdf](https://www.boarddocs.com/va/coa/Board.nsf/files/ALCHUP491974/$file/2017.04.19%20(Packet)%20Proposed%20Poultry%20Ordinance%20Amendment%20-%20Remo%20Residential%20and%20General%20Business.pdf)

## EXHIBIT C: Master Spreadsheet for Zoning Permit Applications

Accomack County Poultry House Numbers July 1, 2014 thru February 27, 2018					
PROJECT DESCRIPTION of ZONING PERMIT					
Permit #	Tax Map #	# of Poultry Houses	# of Manure Sheds	Residential Houses	IssueDate
140839	77-A-93B	2			10-Mar-15
151111	26-A-44	8	1		7-Oct-15
150120	69-A-51 & 54	6			12-Feb-15
160240	125-A-1	8			7-Nov-16
160847	111-A-51A	10	2		12-Apr-17
151113	68-A-196	5			2-Nov-15
151118	103-A-4B	6	1	1	9-Oct-15
151117	103-A-4	6			9-Oct-15
160852	79-A-20A	8			17-Nov-16
160853	79-A-19	8			17-Nov-16
151246	70-A-35	8			23-Nov-15
170541	112-A-127	6	2	1	5-May-17
160831	55-A-74A	9		1	30-May-17
160841	68-A-227	8		1	29-Jun-17
160269	103-A-24	8			5-May-17
160303	103-A-83	8			5-May-17
160292	103-A-85	8			17-Feb-17
160854	86-A-11	8	2		20-Oct-16
160834	70-A-21	4	2		30-Jun-17
160778	54-A-198	8		1	25-Aug-16
160293	111-A-1B	12	2	1	24-Feb-17
160296	111-A-1	12	2	1	9-May-17
160610	12-A-17	6			17-Aug-16
160848	12-A-63	12			7-Nov-16
160304	55-A-76	10	2	1	18-Jul-17
160781	112-4-A	6			20-Oct-16
160301	101-A-25	8	1		21-Sept-17
160840	101-A-26	8	1	1	28-Jul-17
170500	87-A-1	10	2	1	13-Sep-17
171007	77-A-138	8	2		10-Oct-17
170965	78-A-137, 138 & 139	6			22-Sep-17
PENDING	27-A-159	3			
PENDING	13-A-35	4	1		
PENDING	70-A-1	8	1		
<b>Total Approved</b>		<b>240</b>	<b>22</b>	<b>10</b>	
<b>Total Pending</b>		<b>15</b>	<b>2</b>	<b>0</b>	

**EXHIBIT D: Planning Commission 2/27/2018 Work Session Presentation**

[2/27/2018 Work Session Presentation](#)

## EXHIBIT E: DEQ & Poultry Industry Agreed Upon Water Usage Calculation

ABC Farming Operation  
Accomack County, VA  
Groundwater Withdrawal Permit Application

### Facility Information

8 poultry houses (5 houses @ 40 ft width, 3 houses @ 50 ft width)

### Consumption

See Table 1 [below] for metered water consumption data for one (1) flock.

Assuming that water consumption remains generally constant from flock to flock.

$$\text{Annual Flock Consumption} = 564,237 \frac{\text{gal}}{\text{flock}} \times 5.5 \frac{\text{flock}}{\text{yr}} = 3,103,304 \frac{\text{gal}}{\text{yr}}$$

$$\text{Max Monthly Flock Consumption} = \sum_{\text{Day 50}}^{\text{Day 20}} \text{Daily Water Consumption} = 481,225 \frac{\text{gal}}{\text{mo}}$$

### Cooling

See Figure 12 of University of Georgia, Poultry Housing Tips (Evaporative Cooling Pad System Water Usage), Volume 29, Number 1, 2017, for evaporative cooling pad water usage per tunnel fan capacity. [University of Georgia report - 2017, Volume 29, No. 1](#)

$$\text{Annual Cooling (Easton, MD)} \approx \frac{160,000 \frac{\text{gal}}{\text{yr}}}{100,000 \text{ cfm}} \approx \frac{1.6 \frac{\text{gal}}{\text{yr}}}{1 \text{ cfm}}$$

See Page 6 of Cobb-Vantress, Broiler Management Guide, November 15, 2013, [see below] for tunnel fan capacity (operating at an airspeed of 600 fpm) versus house width.

$$\text{Tunnel Fan Capacity} = \left[ 228,000 \frac{\text{cfm}}{\text{hse}} \times 5 \text{ hse} \right] + \left[ 285,800 \frac{\text{cfm}}{\text{hse}} \times 3 \text{ hse} \right] = 1,997,400 \text{ cfm}$$

$$\text{Annual Cooling} = 1,997,400 \text{ cfm} \times \frac{1.6 \frac{\text{gal}}{\text{yr}}}{1 \text{ cfm}} = 3,195,840 \frac{\text{gal}}{\text{yr}}$$

### Requested Withdrawal Amounts

$$\text{Annual Amount} = 3,103,304 \frac{\text{gal}}{\text{yr}} + 3,195,840 \frac{\text{gal}}{\text{yr}} = 6,299,144 \frac{\text{gal}}{\text{yr}} \approx 6,300,000 \frac{\text{gal}}{\text{yr}}$$

$$\text{Monthly Amount} = 481,225 \frac{\text{gal}}{\text{mo}} + \left[ \frac{3,195,840 \frac{\text{gal}}{\text{yr}}}{3} \right] = 1,546,505 \frac{\text{gal}}{\text{mo}} \approx 1,600,000 \frac{\text{gal}}{\text{mo}}$$

Table 1 - Flock Water Consumption (gallons)

Day	House #1 Water Use (Gal)	House #2 Water Use (Gal)	House #3 Water Use (Gal)	House #4 Water Use (Gal)	House #5 Water Use (Gal)	House #6 Water Use (Gal)	House #7 Water Use (Gal)	House #8 Water Use (Gal)	Total
1	6	37	84	57	77	73	3	0	337
2	72	90	187	113	173	118	61	11	805
3	135	160	244	187	252	216	94	36	1,324
4	138	178	278	229	291	274	140	62	1,580
5	161	206	313	283	332	306	215	94	1,882
6	222	270	377	342	404	358	255	137	2,365
7	272	323	427	410	443	468	322	191	2,856
8	354	402	561	539	545	665	425	252	3,743
9	383	438	569	553	574	722	648	569	4,454
10	412	466	621	579	619	593	582	402	4,274
11	439	522	650	647	696	715	675	500	4,844
12	481	576	708	732	710	823	760	609	5,389
13	522	615	780	782	842	897	855	718	6,011
14	516	584	765	764	826	860	806	677	5,788
15	639	732	821	882	894	976	895	806	6,645
16	652	739	900	968	957	1041	937	869	7,083
17	695	790	1023	1020	982	1061	1007	814	7,392
18	741	848	1087	1008	1018	1154	1127	1026	7,989
19	798	899	1101	952	1095	1216	1086	1084	8,231
20	835	954	1148	1323	1189	1332	1334	1177	9,272
21	863	965	1209	1312	1187	1432	1364	1253	9,585
22	908	1034	1328	1340	1259	1529	1439	1341	10,178
23	956	1139	1424	1396	1390	1632	1524	1393	10,653
24	975	1154	1480	1430	1475	1717	1600	1443	11,274
25	1023	1180	1527	1458	1548	1791	1709	1545	11,781
26	1094	1245	1602	1572	1595	1885	1829	1636	12,458
27	1147	1334	1695	1648	1661	1843	1927	1722	12,977
28	1159	1358	1691	1654	1675	1740	1922	1725	12,924
29	1197	1442	1733	1653	1775	2079	1984	1670	13,533
30	1246	1473	1812	1679	1719	2146	1981	1727	13,783
31	1208	1397	1723	1654	1717	2072	1899	1667	13,337
32	1360	1534	1831	1769	1845	2146	1911	1762	14,188
33	1436	1532	1905	1835	1878	2072	2130	1857	14,645
34	1435	1552	1865	1907	1930	2081	2121	1922	14,813
35	1411	1504	1759	1829	1880	2262	2153	1920	14,718
36	1406	1571	1882	1817	1918	2336	2206	1979	15,119
37	1622	1654	2077	2008	1982	2200	2219	2167	15,929
38	1646	1700	2150	2070	2079	2301	2212	2051	16,209
39	1661	1784	2199	2130	2086	2413	2498	2085	16,858
40	1773	1824	2270	2240	2172	2643	2508	2270	17,700
41	1872	1924	2340	2290	2189	2639	2437	2340	18,031
42	1818	2046	1946	2360	2230	2675	2464	2239	17,772
43	1905	2079	2350	2410	2284	2593	2541	2370	18,532
44	2010	2154	2460	2480	2321	2670	2590	2387	19,092
45	2143	2197	2570	2513	2378	2689	2642	2461	19,593
46	2246	2240	2590	2543	2410	2764	2687	2497	19,977
47	2379	2346	2620	2594	2467	2798	2741	2532	20,477
48	2854	2470	2680	2670	2497	2860	2796	2578	21,403
49	2940	2560	2800	2689	2540	2893	2860	2624	21,926
50	2950	2670	2801	2700	2589	2940	2940	2700	22,290
<b>Total</b>	<b>67,145</b>	<b>60,909</b>	<b>72,937</b>	<b>72,000</b>	<b>71,575</b>	<b>81,713</b>	<b>78,063</b>	<b>69,895</b>	<b>564,237</b>

# COBB Broiler Management Guide

## Relation between ambient temperature and water feed ratio

Temperature °C / °F	Ratio water and feed
4 °C / 39 °F	1.7:1
20 °C / 68 °F	2:1
26 °C / 79 °F	2.5:1
37 °C / 99 °F	5:1

Singleton (2004)

### 1.5.3 WATER STORAGE TANKS

Adequate water storage should be provided on the farm in the event that the main system fails. A farm supply of water equal to the maximum 48 hour demand is ideal. The storage capacity is based on the number of birds plus the volume required for the evaporative cooling system.

The following table is an example of the maximum cooling pad water requirement of a modern tunnel ventilated broiler house operating at an airspeed of 3m/s (600 fpm)

#### House Width, Air Speed, Tunnel Fan Capacity and 6 ft. Pad Water Requirement:

House Width	Air Speed	Tunnel Fan Capacity	No Fans (790m <sup>3</sup> /min or 28,000 cfm)	Pad Requirement
12m (40ft)	3m/s (600 fpm)	6456m <sup>3</sup> /min (228,000 cfm)	8	45 l/min
15m (50ft)	3m/s (600 fpm)	8093m <sup>3</sup> /min (285,800 cfm)	10	53 l/min
18m (60ft)	3m/s (600 fpm)	9684m <sup>3</sup> /min (342,000 cfm)	12	64 l/min
20m (66ft)	3m/s (600 fpm)	10653m <sup>3</sup> /min (376,200 cfm)	13	72 l/min

If the source of water is a well or holding tank, the supply pump capacity should match the birds' maximum water consumption and also the maximum needs of the fogging and/or evaporative cooling systems.

Separate water supplies for both the birds and cooling systems should be installed for each house. The following is a table indicating estimated flow rates for different pipe sizes:

Flow rate (l/min)	Pipe Size (mm and in)
20 l/min	20 mm or 0.75"
38 l/min	25 mm or 1"
76 l/min	40 mm or 1.5"
150 l/min	50 mm or 2"
230 l/min	65 mm or 2.5"
300 l/min	75 mm or 3"

Storage tanks should be purged between flocks. In hot climates tanks, should be shaded because elevated water temperatures will decrease consumption. The ideal water temperature to maintain adequate water consumption is between 10 - 14 °C (50 - 57 °F).

## EXHIBIT F: Poultry Waste Management Ownership Chart - 12/1/2015

**\*\*This chart demonstrates the 'ownership' of the poultry litter and its governance\*\***

<b>Poultry Waste Management 'Ownership'</b>		
<b><u>On the Farm (Grower)</u></b>	<b><u>In Transport</u></b>	<b><u>Receiving Farm (End-User)</u></b>
Grower reports to DEQ. Responsible for Virginia Pollution Abatement Permit (VPA) with accompanying Nutrient Management Plan (NMP); Must maintain NMP records. Training Required	Transporter (also known as a Broker) is also responsible for maintaining documentation (transfer records) for NMP. A Broker is not necessary as the Grower can have transport directly to end-user. The Broker must register with DEQ. Records must be submitted annually. Training Required.	End - user is also required to have Nutrient Management Plan through DEQ and maintain records.
<p align="center">**For non-emergencies, violations and for questions related to the Virginia Pollution Abatement Permit (VPA) process and Nutrient Management Plans (NMP's) please contact the Department of Environmental Quality (Tidewater Regional Office) at: (757) 518-2000**</p>		
<p align="center"><b><u>Permit Specifics for Virginia Pollution Abatement (VPA) and accompanying Nutrient Management Plan (NMP):</u></b></p>		
Poultry Waste is defined as dry litter containing poultry manure and/or composted dead poultry. Both are regulated under the VPA and NMP	DEQ regularly inspects the operations and may also request information at any time. This is stored in an electronic content management database.	VPA's are updated every five (5) years. NMP's are updated every year: The waste and receiving soil content is analyzed.
Growers and Transporters are required to complete training program within one (1) year of filing for VPA and every five (5) years thereafter.	Growers, Transporters, and End -Users must maintain records for up to three (3) years and are regularly inspected: 1 to 3 years: higher risk farms inspected more frequently.	Nutrient Management Plans are developed by Certified Permit Specialists.
<p align="center"><b>** Please note that in the event of an emergency (poultry), the Virginia Department of Emergency Services maintains a 24-Hour telephone service at: 1-800-468-8892**</b></p>		

## EXHIBIT G: State Agencies Involved in Poultry State Permit Components

Virginia Pollution Abatement Permit (VPA): Department of Environmental Quality (DEQ) has regulations for pollution abatement of poultry operations and issues either a Virginia Pollution Abatement Permit or Virginia Pollutant Discharge Elimination System (VPDES) Permit. The Nutrient Management Plan (NMP) is included as a requirement of these permits but the approval of an NMP is issued by the Virginia Department of Conservation and Recreation (DCR).

### Contact Info for Pollution Abatement Permits

#### General Information

DEQ: 804-698-4000 or

<http://www.deq.virginia.gov/Programs/Water/LandApplicationBeneficialReuse/LivestockPoultry.aspx>

#### Poultry Related Litter Non-Emergency

DEQ Tidewater Regional Office: 757-518-2000.

#### Poultry Related Litter Emergency

Virginia Department of Emergency Services (24-hour): 800-468-8892.

Nutrient Management Plan (NMP): These plans are required as part of DEQ's permits for pollution abatement (VPA and VPDES). Plans are created by certified specialists and approved by the Department of Conservation and Recreation (DCR) before becoming part of DEQ's pollution abatement permit. The plans contain information on the volume of litter, nutrient content, soil composition of receiving fields, land application timing/rates and ownership. The grower, the person who transports the waste, and the end - user all must maintain records of poultry litter transfer.

### Contact Info for Nutrient Management Plan

DCR: 804-789-2264

<http://www.dcr.virginia.gov/soil-and-water/nutmgt>

VDOT Approval: VDOT reviews the site plan regarding the proposed entrance(s) and access road that it complies with VDOT standards.

### Contact Info for VDOT Approval

VDOT Area Land Use Engineer

Dale Pusey: 757-787-5932

While groundwater withdrawal permits are required for any withdrawal over 300,000 gallons per month from the VA Department of Environmental Quality (DEQ) and new poultry houses make be required to obtain said permit based upon usage, this is a separate permit outside of the zoning permit issued by the County. Information on the groundwater withdrawal permits may be obtained as follows:

### Contact Info for Groundwater Withdrawal Permits

DEQ Water Withdrawal Program Manager: Drew Hammond (804) 698-4101,

DEQ Permit Writer for the Eastern Shore: Matthew Link - (804) 698-4078

<http://www.deq.virginia.gov/Programs/Water/WaterSupplyWaterQuantity/WaterWithdrawalP>

## EXHIBIT H: Letter from Delmarva Poultry Industry - 3/20/2018



### DELMARVA POULTRY INDUSTRY, INC.

16686 COUNTY SEAT HIGHWAY GEORGETOWN, DELAWARE  
19947-4881  
PHONE: 302-856-9037 FAX: 302-856-9799 E-MAIL: dpi@  
dpichicken.com  
[www.dpicken.org](http://www.dpicken.org)

March  
20, 2018

Members of the Accomack County Planning Commission  
P.O. Box 686  
Accomac, VA 23301

Dear Commission Members:

At your March 14, 2018 meeting during discussion of the 2018 Annual Poultry Report, there were several topics discussed and questions asked. Delmarva Poultry Industry, Inc., the 1,800-member trade association working for the chicken industry in Accomack County, the Eastern Shore of Maryland, and Delaware, offers these explanations/comments about some of the issues as you move forward on adopting this report and perhaps in coming months dealing with other chicken concerns. We plan to attend your March 27 work session to answer any additional questions as well.

#### **Air Emissions**

- Efforts are underway in both chambers of Congress to prevent animal farmer reporting of certain air emissions to the U.S. Coast Guard and the Environmental Protection Agency under the 1980 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), often referred to as the Superfund Law. This law was enacted to establish a federal system for industrial facilities to report unexpected emissions of toxic materials so emergency procedures could be implemented. The CERCLA provides for cleanup of America's most dangerous hazardous emergencies, such as oil spills and chemical tank explosions. CERCLA has two primary purposes: to give the federal government necessary tools for prompt response to problems resulting from hazardous waste disposal into water and soil and to hold polluters financially responsible for cleanup.
- It never was the intent of Congress and the President to require such reporting from animal farms due to the natural decomposition of manure. However, a federal lawsuit by some groups in the environmental industry challenged the EPA's 2008 exclusion of farms. This lawsuit was resolved in April 2017 in the District of Columbia Court of Appeals. The court said that because Congress specifically did not exclude animal farms from reporting they therefore were

required to report. The legislation in Congress this month, the Senate Fair Agricultural Reporting Method (FARM) Act and the House Agricultural Certainty for Reporting Emissions (ACRE) Act, is supported by Delmarva Poultry Industry, Inc. and many other animal organizations. These bills will reverse the court ruling and once again not require farmer reporting. In the chicken industry, it is the emissions of ammonia that would need to be reported.

- Unless the court ruling is reversed by Congress, it appears that farmers will need to start making reports to the Coast Guard and the EPA on or near May 1, 2018, once the DC Court of Appeals makes the mandate to EPA. For the chicken industry, this means that farms, not individual houses, emitting more than 100 pounds of ammonia per day (erroneously presented to you at your March 14th meeting as 100 pounds per month) will have to notify the Coast Guard immediately and the regional EPA office within 30 days. That can be done by reporting every day there is the release of 100 pounds per day or through a continuous release report that is good for one year unless there is a change in the farming operation. What the Coast Guard and EPA will do with this information is a mystery since it is not logical to send fire trucks, ambulances, police, and other emergency response personnel and vehicles to chicken farms where manure is decomposing.
- At your March 14th, this reporting system was referred to as an emissions reporting system. In one sense it is, but the reports only have to be submitted to the Coast Guard and EPA once the ammonia emissions level exceeds 100 pounds per day. EPA is trying to determine how growers can make the calculations to trigger the reporting. This system is NOT intended to monitor air emissions for any other purpose. There will not be constant monitoring of chicken farms or neighboring properties. The CERCLA emergency reporting system is not intended to be a precursor to EPA regulations to limit ammonia emissions from chicken farms. It is a self-reporting system by animal farmers through the CERCLA statute only.
- On the more general matter of air emissions from chicken houses, establishing a scientifically valid and affordable system is not as easy as it might seem. The many variables that affect the generation of ammonia make calculating emission values very complicated. To address this issue in 2007, the animal agriculture industry funded the National Air Emissions Monitoring study hoping to develop emission factors that would allow poultry and livestock producers to calculate emissions on their farms. From 2007 until 2009, numerous data points, including ammonia concentration and volume, were collected each minute for the study. While the data collected to develop estimation methodologies were informative, the scientific advisory committee established by EPA to review the process determined that the data lacked the robustness to develop any verifiable test for farmers to report given the many variables that contribute to the generation of ammonia as animal manure decomposes. About a dozen years and about \$12 million were spent on this research and evaluation and EPA could not figure out how to measure emissions. EPA has pledged anew to start development of a reporting protocol. A suggestion was made at your March 14 meeting that the Commonwealth of Virginia or Accomack County try to create a monitoring program. That could be a very expensive and time consuming endeavor.

- While it is true that ammonia, which in significant concentrations and volumes is a substance reportable under CERCLA, it is a byproduct generated as manure naturally decomposes. The concentrations that occur on poultry and eggs farms are at very low levels and they dissipate rapidly into the air.
- A 2009 study by researchers at the University of Georgia found that ammonia concentrations were lower as distance from the poultry house increased, with ammonia levels at 100, 200, 300 and 500 feet being less than 1 part per million in approximately 60, 75, 85 and 90 percent of the observations taken during the study, respectively.
- Researchers found that at no time during the study did the measured ammonia levels meet or exceed the Occupational Safety and Health Administration-Environmental Protection Agency ammonia odor detection threshold values.
- For bird welfare, health and performance, the ammonia level in a chicken house should be no more than 25 parts per million. Ammonia formation is lessened through drier houses. Growers work hard to keep humidity levels low. Better conversion of feed ingredients into meat means less nitrogen in the manure and this helps reduce opportunities for ammonia production. Acidic products are used in most chicken houses to prevent the formation of ammonia.
- According to the U.S. Department of Health and Human Services, "OSHA has set an 8- hour exposure limit of 25 ppm and a short-term (15-minute) exposure limit of 35 ppm for ammonia in the workplace. NIOSH recommends that the level in workroom air be limited to 50 ppm for 56 minutes of exposure."

### **Chicken Production in Accomack County**

- Annually since 1957, Delmarva Poultry Industry, Inc. has collected end-of-the-year data from the chicken companies. Enclosed are the data from 2017. Last year, for the first time, we sought Delmarva state-by-state data on three categories. The data show that at the end of 2017 there were 84 chicken growers using 331 houses to raise birds in Accomack County. The number of houses differs from the data provide by the planning department. Our number is the number of houses being used, not houses with trees through the roof or otherwise out of service or in the planning or construction phase. Our number comes directly from the five chicken companies that know how many growers and houses were in use at the end of the year. And doing the mathematics, you'll note that the average farm in Accomack County had 3.9 houses per farm, only slightly higher than the Delmarva number of 3.2 houses per farm.
- We are working with the chicken companies to address the disparity between our numbers and those from the planning department. We believe some will be houses that are no longer in operation prior to 2014, as well as the number of houses actually built, rather than the number permitted. It is likely that growers would request a permit for more houses than

they build at first, just due to the costs and time of the permitting process. It is easier to reduce the number of constructed houses than to seek more houses after a permit is approved.

- According to data provided by the Virginia Poultry Federation, in these years there were these many chicken houses in Accomack County
  - 2003 85 growers
  - 2011 75 growers
  - 2013 80 growers
  - 2016 76 growers
  - 2017 84 growers per Delmarva Poultry Industry, Inc.

These numbers show no significant growth in the number of farm families growing chickens in the county.

### **Chicken Litter/Manure**

- Chicken litter/manure is a valuable, locally produced, slow release, organic fertilizer for which chicken growers can receive around \$20 per ton. (Litter is the combination of the wood bedding material on the floors of the chicken houses plus the fecal matter from the birds.) Studies have shown that due to the micronutrients and organic matter of the litter, it is a better fertilizer than commercial products. Most of the litter is wood. Only about 3% is nitrogen and only about 3% is phosphorus.
- Farmers use nutrient management plans to guide them on amounts of litter they should apply to their fields. The limiting factor is the amount of phosphorus. Virginia chicken growers who use litter on their fields are required to use nutrient management plans. Non-chicken farmers who use chicken litter are expected to manage the litter according to best management practices, conduct soil nutrient tests, have a manure analysis, observe application setbacks, and properly store the manure.
- The **voluntary** use of nutrient management plans in the three Delmarva states changed 19 to 20 years ago. The state **requirements** started in Virginia in 1999 with the Poultry Waste Management Act. Delaware also started in 1999 while Maryland's law was enacted in 1998. In Delaware and Maryland, plans are required for **all** farmers. That is not the case in Virginia. Farmers who use commercial fertilizer only are not required to have state sanctioned nutrient management plans.
- Chicken growers in Virginia must have a nutrient management plan for them to receive a Department of Environmental Quality Virginia Pollution Abatement (VPA) permit to raise chickens. The Virginia Department of Conservation and Recreation has responsibility for nutrient management plan development and approval and the plans become part of the VPA chicken farm permit.

- The VPA regulation and permit govern the management of poultry litter at permitted chicken farms and poultry litter used or stored by chicken litter end-users or brokers. It also establishes requirements for proper nutrient management, litter storage, and litter tracking, and accounting of chicken litter.
- One of the big questions is "how much chicken litter/manure is produced and how much is available for farming?" The Delmarva Land and Litter Challenge, a group of farmers, chicken company personnel, university and state agency representatives and persons with some environmental groups, is trying to answer that question. A report is due this year.
- As was mentioned at your meeting, some Eastern Shore farmers are finding it difficult to obtain enough litter/manure.
- In some Delmarva chicken houses, the entire amount of litter is not removed for eight years or more. Some companies require more frequent whole-house cleanouts. After each flock of birds, the hardened "crust" is removed from the houses and stored in covered manure storage structures. These different management practices make it difficult to compute litter availability and quantity.
- The Virginia DEQ has the authority to inspect chicken farms for environmental reasons, not the Virginia Department of Agriculture and Consumer Services as was mentioned at your March 14 meeting.
- The chicken companies and growers monitor the condition of the birds in the houses, following strict health and bird welfare standards. The Virginia Department of Agriculture and Consumer Services does not conduct in-house inspections.
- Sussex County, Delaware is the largest county in the production of meat-chickens and has been since the U.S. Department of Agriculture data collection began in the late 1930s.

We appreciate the opportunity to offer these points and look forward to supplying you more information in writing or at Planning Commission meetings.

Respectfully



Bill Satterfield  
Executive Director



Holly Porter  
Assistant Executive Director

# Look What the Chicken Industry Is Doing for Delmarva

2017 Facts about Delmarva's Meat Chicken Industry

Number of Delmarva grown birds.....	605 million
Pounds of Delmarva grown chickens processed.....	4.2 billion
Number of broiler/roaster/Cornish houses.....	5,091
<i>Delaware...2,366</i> <i>Maryland...2,394</i> <i>Accomack County, Virginia...331</i>	
Broiler/roaster/Cornish house capacity .....	138 million birds
<i>Delaware...62.5 million</i> <i>Maryland...65.5 million</i> <i>Accomack County, Virginia...10.2 million</i>	
Broiler/roaster/Cornish growers .....	1,549
<i>Delaware...746</i> <i>Maryland...719</i> <i>Accomack County, Virginia...84</i>	
Poultry company employees .....	18,500
Value of chicks started .....	\$200 million
Annual feed bill.....	\$984 million
Bushels of corn used for feed .....	87 million
Bushels of soybeans used for feed .....	36 million
Bushels of wheat used for feed .....	1.6 million
Packaging and other processing supplies .....	\$240 million
Poultry company capital improvements .....	\$152 million
Grower contract payments.....	\$256 million
Poultry companies payroll, excluding benefits.....	\$752 million
Wholesale value of broilers/roasters/Cornish .....	\$3.4 billion

Prepared by:  
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 February 2018  
 ffacts17



# Look at what the chicken industry is doing for Delmarva.



Delmarva Poultry Industry, Inc. publishes annual data about the chicken industry in the Eastern Shore of Maryland, Delaware, and the Eastern Shore of Virginia. In 2017, the data show, Delmarva's chicken industry grew at a modest pace, with processing production increasing 2 percent year-to-year. While chicken house capacity increased 13 percent in 2017, it has grown an average of less than 1 percent a year in the past decade. Contract payments to chicken growers and the wages of chicken company employees also grew, indicating a healthy chicken economy- one valued at \$3.4 billion in wholesale value of the goods it produced. We do it all to meet the growing consumer demand for healthy, tasty chicken.

## In 2017, the Delmarva chicken industry:

	1-year change	10-year change	20-year change
Raised 605 million chickens.	+2%	+7%	-1%
Processed 4.2 billion pounds of chickens.	+2%	+22%	+34%
Raised in 5,091 chicken houses.	+8%	-5%	-12%
The houses had a capacity of 138 million chickens.	+13%	+7%	+11%
There were 1,549 chicken growers.	+3%	-20%	-41%
They earned \$256 million in contract income.	+5%	+17% <sup>'''</sup>	+30% <sup>*</sup>
There were 18,500 chicken company employees.	+28% <sup>**</sup>	+25%	+31%
They earned \$752 million in wages, excluding benefits.	+13% <sup>**</sup>	+60% <sup>'''</sup>	+59% <sup>*</sup>
Feed ingredients for chickens were purchased for \$984 million.	-1%	+18% <sup>'''</sup>	-3% <sup>*</sup>
The wholesale value of chicken produced was \$3.4 billion.	+6%	+43% <sup>'''</sup>	+38% <sup>*</sup>

<sup>\*</sup>inflation-adjusted <sup>\*\*</sup>For 2017, one company added a previously uncounted business un



Chicken growers and companies planted 8,444 trees and grasses in 2017 as part of Delmarva Poultry Industry, Inc.'s vegetative environmental buffers program.



Chicken companies purchased 87 million bushels of corn, 36 million bushels of soybeans, and 1.6 million bushels of wheat for chicken feed in 2017.



Chicken companies purchased \$240 million in packaging and processing supplies in 2017.



Delmarva's chicken companies invested \$152 million in capital improvements in 2017, including investments in solar energy, hatcheries and processing plants.



# What else did Delmarva's chicken industry accomplish in 2017?



## We helped the agricultural sector meet benchmarks for improving water quality.

Chicken growers and chicken companies, in partnership with the rest of agriculture, are succeeding in meeting Chesapeake Bay clean-up benchmarks established by the U.S. Environmental Protection Agency.

Here's one example. By June 30, 2017, one benchmark goal in Maryland was to annually transport 51,000 tons of poultry litter or livestock manure from farms that *don't* need it to farms that can use the manure in accordance with best management practices. As it turned out, **241,900 tons of manure were transported in 2017- more than four times the benchmark goal.**

Another benchmark the EPA asked us to meet by 2017 was to construct at least 31 new Maryland manure storage structures. Family farms raising chickens more than met that goal, **constructing 149 manure storage structures between 2009 and 2017.** Our farmers' hard work also helped the Bay meet benchmark goals for forest buffers planted, grass buffers planted and cover crops planted.

## We gave back to the communities in which our members live, and to people in need around the country.

In 2017, our members donated food and funds to food pantries, churches, and people in need. Chicken companies also stepped up with urgently needed donations to help the victims of floods in Texas, mudslides in California and wildfires in North Carolina.

Delmarva Poultry Industry, Inc.'s college scholarship fund awarded \$16,000 to eight students interested in careers in the chicken industry.

AmickOFanns





# EXHIBIT I: EPA Exempts Chicken Farmers from CERCLA Reporting Requirements

## EPA EXEMPTS CHICKEN FARMERS FROM CERCLA REPORTING REQUIREMENTS

Mar 27, 2018



WASHINGTON, D.C. — Farmers raising chickens all around Delmarva breathed a sigh of relief after Congress passed, and President Donald Trump signed, an omnibus spending bill that restores an exemption for farmers from burdensome regulations under the Comprehensive Environmental Response, Compensation and Liability Act, or CERCLA. This development followed testimony on Capitol Hill by Delmarva Poultry Industry, Inc. executive director Bill Satterfield in favor of standalone legislation restoring the farm exemption from CERCLA reporting. The effort to restore the exemption was led by farmers and animal agriculture groups around the country.

CERCLA is a law enforced by the U.S. Environmental Protection Agency (EPA) that require entities releasing hazardous substances, like ships or factories, to notify the federal government for emergency response purposes only. When the law was passed, EPA did not believe that reports on the routine release of low levels of ammonia from chicken houses, for instance, was included in the intent of the law. However, a lawsuit was filed by several environmental groups saying animal agriculture should not be excluded, and in April 2017, the U.S. Court of Appeals for the D.C. Circuit ruled in favor of those groups. EPA then informed farmers they would need to make multiple reports estimating the routine air emissions from their chicken houses beginning May 1, 2018, although EPA had not been able to provide farmers with approved methods of determining those estimates.

MAR 27, 2018 - TUE

ONLEY, UNITED STATES

43°F

overcast clouds

7 mph, SE  
75%

MAR 27, 2018 - TUE

CAPE CHARLES, UNITED STATES

44°F

overcast clouds

5 mph, SE  
70%



Sens. Tom Carper and Chris Coons of Delaware, Sen. Mark Warner of Virginia, Rep. Lisa Blunt Rochester of Delaware and Rep. Andy Harris of Maryland cosponsored the original legislation restoring agriculture's longstanding exemption from CERCLA reporting. The inclusion of a permanent CERCLA exemption in the omnibus bill achieves the same result as those House and Senate bills.

The new law does not create a new reporting exemption. It merely restores the CERCLA reporting requirements to where they were since 2008, and it does not change reporting requirements under a different federal law (the Emergency Planning and Community Right to Know Act, or EPCRA) that requires emissions reporting to state and local emergency response agencies.



"With the looming uncertainty of CERCLA reporting now taken off farmers' plates, chicken growers can turn their focus back to producing an economical, safe and wholesome supply of food for the United States and the world," Satterfield said.