IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND

WATERKEEPER ALLIANCE, INC.	*	
	*	
v.	*	
	*	Civil Action No. WMN-10-487
ALAN HUDSON et al.	*	
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FINDINGS OF FACT AND CONCLUSIONS OF LAW

I. INTRODUCTION

This suit was brought pursuant to the citizen suit provision of the Clean Water Act (CWA), 33 U.S.C. § 1365. While there were other plaintiffs initially, the sole remaining plaintiff is Waterkeeper Alliance, Inc. (Waterkeeper), a national non-profit engaged in various efforts to promote water quality protection and restoration.[1] Defendant Alan Hudson[2] operates a farm (the Hudson Farm) on the Eastern Shore of Maryland near the Pocomoke River. In addition to field crops, Hudson raises beef cattle and chickens. Defendant Perdue Farms, Inc. (Perdue) is a "poultry integrator" and, during the time

[1] The additional plaintiffs were dismissed by the Court on a motion to dismiss. See ECF Nos. 26 & 27.

[2] Plaintiffs initially named the "Alan and Kristin Hudson Farm" as a defendant. During the course of trial, the Court granted Plaintiff leave to amend the Complaint to delete that Defendant and to name, instead, Alan Hudson and Kristin Hudson, individually. Kristin Hudson was subsequently dismissed by stipulation.

relevant to this action, Perdue contracted with Hudson to raise Perdue's Cornish hens.

The substance of Plaintiff's claim is that chicken litter, which is alleged to contain various pollutants, was discharged without a permit from the Hudson Farm into Prong 2 of the Franklin Branch, a tributary of the Pocomoke River. Although Plaintiff's theory as to the source of that chicken litter has changed over time, its theory at trial centered on litter that is either blown out through the chicken house exhaust fans or tracked out on shoes and equipment coming in and out of the chicken houses. In addition to the alleged direct liability of Mr. Hudson, Plaintiff seeks to hold Perdue liable under the CWA on the theory that it exercises sufficient control over the day-to-day operations of the Hudson Farm's poultry operations so as to be deemed an "operator" of those poultry operations as well.

On March 1, 2012, the Court denied cross-motions for summary judgment, ECF No. 143, and the case proceeded to a bench trial. The Court heard testimony and received evidence over the course of 10 days, between October 9, 2012, and October 23, 2012, after which the Court invited the parties to submit proposed findings of fact and conclusions of law. Each of the parties did so, ECF Nos. 201 (Hudson's), 202 (Perdue's) and 203 (Waterkeeper's) and also filed further responses. ECF Nos. 204

(Perdue's), 205 (Hudson's), and 206 (Waterkeeper's). The Court then heard closing arguments on November 30, 2012.

After receiving the testimony, carefully considering all of the evidence, weighing the credibility of the witnesses, reviewing the exhibits and briefs, and studying the applicable law, this Court makes the following Findings of Fact and Conclusions of Law pursuant to Fed. R. Civ. P. 52. The Court notes that to the extent any of the following Findings of Fact constitute Conclusions of Law, they are adopted as such, and to the extent any Conclusions of Law constitute Findings of Fact, they are so adopted.

Briefly stated and as explained more fully below, the Court concludes that Plaintiff has failed to meet its burden of establishing that there was a discharge of pollution from the poultry operation on the Hudson Farm.

II. FINDINGS OF FACT[3]

This year marks the fortieth anniversary of the passage of the Clean Water Act. When Congress first passed the Act, it articulated a goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters. 33 U.S.C. § 1251. The statute has been highly effective in cleaning up some of the nation's waterways. Unfortunately, the

[3] Citations to the extensive record in this action are only provided for those factual assertions that the Court believes are potentially in dispute.

Chesapeake Bay is, for the most part, not one of them. The Pocomoke River, a tributary of the Chesapeake Bay, in whose watershed the Hudson Farm is located, is impaired by nitrogen, phosphorus, and bacteria, all pollutants that are associated with animal manure.

Waterkeeper states as one of its goals, "[t]o promote water quality and the protection and restoration of waterbodies through litigation, education, scientific research and all other legal means." Pl.'s Ex. 23 at 5. The citizen enforcement suit is one of the primary weapons in Waterkeeper's arsenal. Waterkeeper notes that "[c]itizen suit provisions, like Section 505 of the CWA, ensure that citizens have the opportunity to protect their environment when the government fails to do so." ECF No. 165 at 8 (Pl.'s Trial Brief, citing Gwaltney v. CBF, 484 U.S. 49, 60 (1987)). "'Congress intended citizen suits to both goad the responsible agencies to more vigorous enforcement of the anti-pollution standards and, if the agencies remained inert, to provide an alternate enforcement mechanism.'" Id. (quoting Baughman v. Bradford Coal Co., Inc., 592 F.2d 215, 218 (3rd Cir. 1979)).

Waterkeeper is a membership organization and among its members are Assateague Coastal Trust (ACT) and Kathy Phillips, the "Assateague Coastkeeper." In addition to testimony from Phillips, Plaintiff offered evidence, either through testimony

at trial or by declaration, from several other individuals who are members of ACT: Stacy Paulsen, Gael W. Carlson, and David Harvey. Each stated that they kayaked, canoed, fished, or simply enjoyed observing the scenery and wildlife on the Pocomoke River at or below the point where the Franklin Branch enters the Pocomoke River.[4] Each testified that, due to concerns about pollution coming off of the Hudson Farm, they have either ceased recreating on the Pocomoke River or that their enjoyment or frequency of recreational activities on the river has diminished. All but Paulsen further testified that, were that pollution to be addressed, they would again recreate on the Pocomoke with greater frequency and enjoyment.

As Coastkeeper, Phillips is responsible for the day-to-day operations of ACT. Phillips describes the purpose of ACT as advocating for "the preservation of the natural resources of the Worcester County region, which includes . . . the Pocomoke River." Phillips, Tr. 2[5] at 13. Of special concern to Phillips and Waterkeeper is pollution from agricultural runoff on the Eastern Shore, particularly the "environmental and social

[4] The distance from the Hudson Farm to the Pocomoke, along the Franklin Branch, is about 3.5 miles.

[5] For ease of reference, the Court will cite the trial transcript by trial day (1 to 10). For days in which separate transcripts were prepared for the morning and afternoon session, the Court will designate the morning session transcript as (A) and the afternoon's as (B). So for example, "Tr. 1A" is the transcript of the morning session of the first trial day.

devastation caused by [Concentrated Animal Feeding Operations, or] CAFOs." Phillips, Tr. 2 at 57; Perdue's Ex. 218 (Phillips Decl. at ¶ 21). While on the witness stand, Phillips tried to distance herself from statements made elsewhere by other spokespersons of Waterkeeper. It appears to the Court from her testimony, and the overall course of this litigation, that Waterkeeper has a goal of using the CWA to force poultry integrators, like Perdue, to seriously alter if not abandon their operations on the Eastern Shore. While no one could question the passion with which Phillips approaches that goal, the Court observed in her testimony and her conduct a certain "ends justifies the means" approach, where truth can be "spun" to achieve a desired goal.

In her role as Coastkeeper, Phillips, accompanied by a Waterkeeper Alliance attorney and a reporter from the Wall Street Journal, conducted an aerial surveillance flight over the farmland of the lower Delmarva Peninsula on October 20, 2009. Phillips, Tr. 2 at 76-77. The plane was furnished through Lighthawk, a non-profit organization that provides environmental organizations access to planes, helicopters, and pilots. The purpose of the flight was to "document industrial chicken farms in the region to inform a Clean Water Act lawsuit [Waterkeeper] intend[ed] to file." Perdue's Ex. 140 (Lighthawk memo re: purpose of flight). Specifically, they were looking for

"outside storage of poultry litter." Perdue's Ex. 141 (Phillips' trip comments). The next day, Phillips reviewed the photographs taken during the flight and concluded that there was a large uncovered pile of poultry manure located near the chicken houses on the Hudson Farm. She also concluded that the ground around the pile was trenched to channel runoff from the pile to a nearby drainage ditch.

A general description of the layout of the Hudson Farm is helpful at this point. Like much of the Eastern Shore, the Hudson Farm is very flat. To help drain the fields, a network of drainage ditches was created many years ago to channel ground and surface water. One of the primary ditches on the property, Ditch 1, traverses through the center of the farm, from the northeast corner to southwest corner, where the ditch exits the farm property, intersects with other ditches, and the water then travels through a culvert under Route 50 and into Prong 2 of the Franklin Branch. Near the center of the farm, Ditch 1 passes just to the west of the two chicken houses. The pile that Phillips observed in the photographs was just north of the chicken houses, and also near Ditch 1.

The two chicken houses on the Hudson Farm are approximately 500 feet long and 40 feet wide, with the long dimension running east to west. The northern house is designated as House #1, the southern house, House #2. Each house can hold approximately

40,000 birds. Between the two chicken houses is a manmade vegetated swale, approximately 60 feet wide.

There are five sidewall fans on each poultry house, four of which are directed towards the swale, and one is located on the east end of each house. Pl.'s Ex. 18 (photo of houses). In addition, there are six large tunnel ventilation fans on the westernmost end of each house. Three of the tunnel fans in each house are directed towards the swale. The other three fans in each house are located on the sides of the houses opposite of the swale.

There are also concrete pads at both ends of both houses. There are large "heavy use area pads" (HUA pads) on the eastern end of both houses. The pad on the western end of House #1 is slightly smaller to permit a sufficient vegetative buffer between it and Ditch 1. The pad on the western end of House #2 is smaller still for the same reason; Ditch 1 runs much closer to House #2 than House #1. The purpose of the concrete pads is to permit any chicken litter that is tracked out of the houses to be swept back into the houses.

The ground in the swale between the houses is graded to gradually slope from the houses to the center of the swale and the center of the swale slopes gradually from east to west. At the west end of the swale is a pipe that penetrates a berm and enters Ditch 1. Just to the south of the chicken houses is

Ditch 3, which also drains into Ditch 1. Ditch 3 runs between House #2 and a field used by Hudson as a cow pasture. As discussed more fully below, the origin of Ditch 3 is an area of the farm that was once a dairy operation but is now a place where the cattle from Hudson's beef operation frequently traverse and gather.

After her observation flight, Phillips began sampling the water near the point where Ditch 1 exits the Hudson Farm. Samples were taken on twelve occasions from October 21, 2009, through April 9, 2010. Many of these samples showed alarmingly high levels of fecal coliform (FC), E. Coli (EC), nitrogen (TKN) and phosphorous (P). Phillips and Waterkeeper assumed that the source of these high levels of pollutants was the large uncovered pile of what they believed to be chicken manure. For the next two months, however, Phillips and Waterkeeper did not express their concerns to either state or federal environmental regulatory agencies.

On December 17, 2009, Waterkeeper filed a "Notice of Intent" to sue Hudson Farm and Perdue. Despite the fact that Waterkeeper had never tested the pile nor attempted to gain access to test the pile, Waterkeeper represented in that notice that "[o]ur investigation revealed that Hudson Farm stockpiles uncovered poultry manure next to a drainage ditch in its production area." Pl.'s Ex. 14. Phillips also held a press

conference on December 17, 2009, announcing the filing of the Notice of Intent to Sue and represented that the Hudson Farm was discharging pollution from an uncovered pile of chicken manure. Phillips, Tr. 2A at 80.

In response to Plaintiff's Notice of Intent, four Maryland state employees visited the Hudson Farm the next day, December 18, 2009. Those employees were: Harry Hunsicker and Richard Stewart of the Maryland Department of the Environment (MDE) Water Management Administration compliance staff; Doug Jones, District Manager for the Worcester Soil Conservation District; and David Mister, the Maryland Department of Agriculture's (MDA) Regional Coordinator for the Eastern Shore. Mister, Tr. 9A at 65-7. Of the four, only Mister was called as a witness, and he was called by Perdue.

The Court finds Mister to be a very knowledgeable and credible witness. Mister has been MDA's Regional Coordinator since 1995. In that role, he has attended numerous workshops sponsored by MDE and the United States Environmental Protection Agency (EPA) regarding CAFOs and CAFO inspections. He has also conducted inspections on hundreds of poultry farms and has accompanied the EPA on all of that agency's site visits to Delmarva poultry farms.

Mister and the other MDE staff quickly determined that the large pile on the Hudson Farm was not chicken manure but was

Class A bio-solids. These bio-solids were obtained from the Ocean City Wastewater Treatment Plant several months earlier and Hudson was anticipating spreading the material on his fields as fertilizer.[6] After determining the nature the pile, Mister and the other MDE and MDA staff conducted an inspection of the poultry operation on the Hudson Farm to determine if there were any water quality issues. Mister took photographs and annotated those photographs as is his standard practice and those photographs were submitted into evidence. Perdue's Ex. 87. Mister noted that there was a "small amount of litter on [the western HUA pad of House #1] from the recent cleanout." Id.[7] As for the small concrete pad on the western end of House #2, Mister observed "[t]here are no discharges from this area" and noted that discolored areas on his photograph were "mud and not manure." Id. He opined that there was "no more than a wheel barrow load of [litter] between both houses." Id. Regarding the swale, Mister noted, "Good vegetated area between the two chicken houses. No problems with manure or dust from the tunnel

[6] The MDE ultimately determined that Hudson was improperly storing the material and sought a fine of $4,000 related to that improper storage. An administrative judge, however, subsequently declined to impose the fine.

[7] Hudson was not on the farm on the day of this visit and Mister simply assumed that the litter he observed was from a recent cleanout. Hudson was actually "windrowing" by this time, a process of piling litter inside the house to accelerate composting and that does not require "clean outs." Thus, it is not clear how long this litter had been on the concrete pad.

fans." Id. Regarding the vegetated buffer area between the south side of House #2 and Ditch 3, Mister observed, "the vegetation in this area is very good. . . . There is no evidence of any type of discharge from this side of the poultry houses." Id.

Shortly thereafter, Brian Littlefield of the MDE visited the Hudson Farm and instructed Mr. Hudson to move the pile of bio-solids farther away from Ditch 1, to cover it with a tarp, and to place hay bales around the pile. Mr. Hudson did so by early January 2010. Mr. Hudson also placed a large hay bale at the head of Ditch 3, believing that, in addition to the bio-solids pile, his cows might be a source of the high levels of bacteria and nutrients sampled in the water leaving his farm.

After the discovery that the pile on the Hudson Farm was bio-solids, and not chicken manure as first alleged, Phillips and Waterkeepers continued to represent to the press and public that the pile contained a mixture of human waste and chicken manure. Remarkably, Phillips on behalf of ACT issued a press release on December 23, 2009, stating that "[w]e are appalled to learn from Perdue's public statements that it now admits importing human sewage into [the Hudson Farm]," Perdue's Ex. 145, although Perdue had never made any such admission. As late as February 27, 2010, Phillips continued to state in press releases that the pile contained chicken manure, despite the

fact that she had no evidence to support that representation. See Phillips, Tr. 2 at 97-98; Perdue's Ex. 180.

A second inspection of the Hudson Farm occurred on January 26, 2010, when ten employees of the Maryland Department of the Environment visited the Hudson Farm. Among the ten were an Assistant Attorney General, the assistant director of MDE's Land Management Administration (LMA), a section head from LMA, two LMA inspectors, a district manager (David Bramble) from MDE's Water Management Administration (WMA), a compliance specialist from WMA (Richard Stewart), and three employees from the Science Services Administration who were there to collect water samples (Kathleen Bassett, William Beatty, Ian Spotts). Perdue called Bramble as a witness in its case, Plaintiff called Bassett, Beatty and Spotts as witnesses in its case.

Like Mister, the Court found Bramble to be a knowledgeable and credible witness. He testified that he has 16 years of experience with the Maryland Department of Agriculture's Soil Conservation Program. In that capacity, he designed and implemented best management practices for erosion and sediment control, waste management, and waste storage for poultry and livestock operations. From 2000 to 2010, Bramble did compliance and inspection work for MDE's WMA. During the January 26, 2010, inspection of the Hudson Farm, Bramble and Stewart walked through and inspected the production area around the chicken

houses, the cattle barns, and the cattle feeding and watering areas. Bramble testified that he observed "trace amounts of chicken litter" on the HUA pads on the eastern end of the chicken houses. Bramble, Tr. 9A at 46. He also stated that he did not recall observing material below the sidewall fans. Id. at 52. Regarding the cattle operation, however, Bramble reported, "that the farmer had approximately 42 head of beef cows that are being fed in a small dirt field with manure coming into contact with stormwater which was contributing to the farm runoff to the open ditch." Perdue's Ex. 128 (1/27/10 email from Bramble to his supervisor). As discussed below, from Bramble's testimony and from a review of the photographs he took on January 26, 2010, it is clear to the Court that this pool of stormwater, in which the cow manure was laying, drained into the eastern end of Ditch 3.

Water samples were also taken on January 26, 2010, from five sampling points in Ditch 1 and one sampling point in Ditch 6, a ditch on another part of the farm that runs just to the south of one of the Hudson Farm cow pastures. Three of the sampling points in Ditch 1, HF05, HF04, and HF03, were above the chicken houses. Sampling point HF02 was located below the point where the swale pipe entered Ditch 1, but also below the point where Ditch 3 entered Ditch 1. The last sampling point on Ditch 1 was located near the point where Phillips and Waterkeeper had

done their sampling, i.e., where the ditch left the Hudson Farm. Beatty testified that a significant factor in determining where the samples were to be taken related to the MDE samplers' ability to access the steep, heavily vegetated ditches. Bramble, Tr. 2 at 175. It is important to note that the purpose of this testing was focused on evaluating the residual pollution from the bio-solids pile and the testing was not designed to isolate whatever contribution there might have been from the chicken houses.

The samples taken on January 26, 2010, from Ditch 1 yielded the following results:

HFO5 (FC: 13; EC: <100; TKN = 0.8; P = 1.07)

HFO4 (FC: 13; EC: 100; TKN = 1.3; P = 0.95)

HFO3 (FC: 2,300; EC: 730; TKN = 3.5; P = 0.92)

HFO2 (FC: 300,000; EC: >241,920; TKN = 5.3; P = 1.99)

HFO1 (FC: 70,000; EC: 111,990; TKN = 2.5; P = 1.65).

The sample taken from Ditch 6 yielded these results:

HFO6 (FC: 50,000; EC: 51,720)

These sample results obviously indicate that something significant was happening between HF03 and HF02, that something was adding high levels of bacteria and nutrients to the water in Ditch 1. Because of the location of the sampling points, the likely candidates would be water entering from the swale between the chicken houses, or water from Ditch 3, or both.

Unfortunately, because HF03 is above both the swale and Ditch 3 and HF02 is below both of those potential sources, the sampling data from January 26, 2010, is of no assistance in determining how much pollution is coming from either of those sources.

Photographs taken of the Hudson Farm and the testimony of witnesses on the farm, however, do provide the Court with clear indications as to the source of the pollutants. During the relevant time period, October 2009 to April 2010, the Hudson Farm housed between 85 and 90 cows and calves - one bull, 40 brood cows, and calves. Each cow produces about 60-80 pounds of manure per day and, thus, the Hudson Farm cattle together produce about 3000 pounds of manure per day. Hudson does not collect the cow manure that is deposited in his fields or barnyard. Furthermore, there is no dispute that cow manure contains the same bacteria and nutrients, including fecal coliform, E. Coli, nitrogen, and phosphorous, that were found in the water samples taken on the Hudson Farm.

In contrast to the chickens that are always confined, the cattle on the Hudson Farm were permitted to graze in several different fields. Water, however, was only available at one location, a water trough located near the drainage area at the head of Ditch 3. Cows take water two or three times a day and from the aerial photographs of the farm, one can clearly see the paths taken by the cows from the various pastures to the water

trough. All of these paths go through the drainage area at the head of Ditch 3. See Perdue Ex. 59. Also, because the winter of 2009/2010 was exceptionally wet, Hudson set up a feeding area and a bedding area on a concrete pad near the trough that also drained to Ditch 3, further concentrating the cattle in this area.

Photographs taken during the relevant time period clearly show an abundance of cow manure near Ditch 3 and in the area near the water trough that drained into the ditch.[8] See, e.g., Perdue's Exs. 4, 5, 18. As Bramble noted, this manure is in direct contact with significant amounts of water. He also noted that the topography permitted that water to drain into Ditch 3. Bramble, Tr. 9A at 61-2. The Court also observes that the fact that there is a culvert placed under the farm lane connecting this barnyard drainage area to Ditch 3 is a fairly obvious indication that the barnyard was intended to, and does, drain into Ditch 3.

[8] Plaintiff and Plaintiff's expert, Bruce Bell, contend that this area does not drain, or drains little, into Ditch 3. See Bell, Tr. 5A at 48-51. From the review of the photographs, see Perdue's Exs. 16 and 18, the Court concludes that it clearly would drain into Ditch 3, particularly in wet weather. To the extent that the photographs entered in evidence might be misleading or might tell an incomplete story, the Court notes that Defendants requested that the Court conduct a site visit to make first-hand observations of the farm. ECF No. 150. Waterkeeper strenuously objected to the Court doing so, ECF No. 153, and the Court declined the invitation.

Furthermore, while there is some dispute as to how much Ditch 3 slopes towards Ditch 1, there can be no serious dispute that, with any significant rainfall, water in Ditch 3 will flow into Ditch 1. Ditches are designed to drain the land. Ditch 3 has no outlet to the east. Ditch 3 connects to Ditch 1 to the west. Thus, it is clearly designed to flow into Ditch 1. Furthermore, Hudson and Perdue's expert both testified that Ditch 3 flowed westward into Ditch 1. Hudson, Tr. 7B at 16; Charles Hagedorn, Tr. 8A at 82. Even Plaintiff's expert witness, Bruce Bell, implicitly conceded that there was some flow in Ditch 3 to Ditch 1. Bell testified that "a portion of what's in the barnyard" will contribute to a sample from HF02. Bell, Tr. 5A at 50-51. This contribution could only occur if Ditch 3 flowed into Ditch 1.

Bassett also testified that she observed cow manure in the pasture near Ditch 3 (Field 15). Bassett, Tr. 3 at 139. While Bell initially sought to minimize the portion of that pasture that drained towards Ditch 3, when confronted with a contour map during cross examination, he conceded that a much larger portion of the pasture would drain to Ditch 3 or Ditch 1 above HF02. Bell, Tr. 5A at 87-88.

While the unconfined cattle produce literally tons of manure that is left in the fields, some which is in direct contact with runoff, Plaintiff contends that it is chickens that

are the major source of pollution on the Hudson Farm. In contrast to the tons of cattle manure, what was observed outside of the chicken houses and identified as actual chicken litter is limited to small or trace amounts that were seen on the concrete pads. There is some additional material that was described as litter or simply as "dust" on the fans and on the ground immediately below the fans, but that material was never tested to determine if it was indeed chicken litter or manure, or what its bacterial or nutrient content might have been. Nor, for that matter, was the litter found on the concrete pads ever tested.

The Court also notes that no photograph shows any water actually coming out of the swale pipe and no witnesses testified that they observed water coming out of the pipe. See Pl.'s Exs. 164, 167, 169 (showing Ditch 1 end of swale pipe with no water exiting) and Perdue's Ex. 86A (showing swale end of pipe and no water). Photographs of the swale itself show either no water, whatsoever, in the swale, Perdue's Ex. 88 at DA001841, or very small isolated puddles, Perdue's Ex. 3 and Pl.'s Ex. 171. Mister testified concerning the litter he did see on the pads that he did not observe "any channels in the ground that appeared . . . capable of directing water or manure to the ditch." In short, there was no evidence of any observable

discharge of pollution from chicken litter into any ditch on the Hudson Farm.

Plaintiff notes, correctly, that bacteria and nutrients can be microscopic and, thus, not all discharges would be visible to the naked eye. To support the theory that a discharge must have occurred despite the fact that no discharge was ever observed, Plaintiff turns to its expert, Dr. Bell. While the Court noted during closing arguments that it found Bell to be, for the most part, credible and forthcoming, the Court also notes that he makes half of his income as a professional expert and testifies on behalf of plaintiffs bringing environmental actions 90 percent of the time. Bell, Tr. 5A at 11-12. In addition, his curriculum vitae indicates that he has authored only two publications since 1990, the last being in 1996. Pl.'s Ex. 27 at 15. The Court qualified Bell as an expert in environmental engineering, "fate and transport of pollutants, as well as environmental sampling, stormwater management, environmental microbiology and chemistry." Tr. 5A at 11, 14.

In his testimony, Bell proffered different "pathways" that microscopic amounts of chicken litter and attendant pollutants could have found their way into the Franklin Branch. Specifically, he proffered two "primary pathways to get manure or litter or dust . . . from inside the chicken houses to the outside to the ditches:" "fans discharging contents of the

chicken house, in effect" and "drag-out of manure directly during placements, during any time you bring equipment in and out of the house [and] some, any time you bring people in and out of the house." Bell, Tr. 5A at 62-63. While mentioning "drag-out" as a pathway, Bell focused most of his attention on the fans. Bell, in fact, came close to conceding that he did not know if there was any litter on the concrete pads that would have contributed to the results of the January 26, 2010, sampling. Bell, Tr. 5A at 75.

To support his "exhaust fan" pathway, Bell relied on two scientific papers[9] that state that the air in chicken houses can contain fecal bacteria and that, for the particular chicken houses studied, bacteria was found outside of the houses, up to 40 feet from the exhaust fans. As Perdue points out, however, the studies are far from conclusive in determining whether bacteria were emitted from the fans on the Hudson Farm. The Davis and Morishita article was based upon a study of caged layer houses with significantly larger bird capacities than those on the Hudson Farm. Unlike the Hudson Farm houses, these

[9] "Relative Ammonia Concentrations, Dust Concentrations, and Presence of Salmonella Species and Escherichia coli Inside and Outside Commercial Layer Facilities." Meredith Davis and Teresa Morishita, Avian Diseases, 49(1):30-35. 2005 (Perdue's Ex. 185) and "An Aerobiological Perspective of Dust in Cage-housed and Floor-housed Poultry Operations" Natasha Just, Caroline Duchaine and Baljit Singh, Journal of Occupational Medicine and Toxology 2009, 4:13. (Pl.'s Ex. 916).

caged layer houses employ manure pits, not litter to absorb waste. Also, the fans in the study ran "constantly," whereas the Hudson Farm fans typically run only 12 minutes per hour and even less in the winter. Finally, Davis and Morishita acknowledged that further study was needed to even determine if the bacteria found outside of the facilities was the same as the bacteria isolated inside the facility. Perdue's Ex. 185 at 34.

The second "study," the Just article, is more of a review of the literature, not an independent study. The article focuses on contaminates in the air inside of poultry facilities and the impact of those contaminates on poultry workers. In a single paragraph, the article mentions contaminates exiting the poultry house and states that "[c]ontaminated indoor air is expelled from animal facilities by exhaust fans," but the only authority cited for that position is the Davis and Morishita study. The article also mentions that dust in poultry facilities is a "complex mixture" of organic and inorganic material that, in addition to fecal matter, urine and other environmental contaminates, also includes skin flakes, pollen, feed and litter particles, and feathers. Pl.'s Ex. 916 at 2. The article further mentions that the aerosolization of contaminates can be affected by a number of variables including: "animal activity, air temperature, relative humidity, ventilation rate, animal stocking density, animal mass, type of

litter, type of bird, bird age, type of feed, feeding method, time of day, air distribution, relative locations of dust sources and presence or absence of air cleaning technologies." Id. at 4. Beyond that variability, the article notes that the survival time for bacteria suspended in the air or attached to poultry dust can be affected by any number of factors including: "mechanism of dispersal into the air, deposition on host surfaces, host susceptibility, humidity, temperature, bacterial repair processes and the open-air factor, which can kill microorganisms." Id.

Given this variability in the composition of dust that can be emitted from poultry houses, it seems that the obvious method for Plaintiff to have attempted to prove its case would have been to sample some of the dust emitted from the fans on the Hudson Farms. Plaintiff repeatedly displayed before the Court a large blowup of a photograph of material that had accumulated on the Hudson Farm tunnel fans. See Pl.'s Exs. 168, 172. While Bell described the material as chicken litter, others who are familiar with poultry operations determined it was dust, not litter. Tammie Seyfert, Tr. 4B at 59-60; Jeff Smith, Tr. 3 at 69. Plaintiff also makes much of the fact that a light colored substance can be seen in the areas immediately around the exhaust fans in several photographs. It would, of course, have been a simple matter to sample the material seen accumulated on

the fans or the soil underneath the fans and yet Bell, who was designated as an expert in "environmental sampling," took no such samples.

Similarly, to demonstrate the validity of his pathway theory, Bell could have taken samples of the water in Ditch 1 below the swale pipe but above where Ditch 3 enters Ditch 1. This would have isolated the alleged contribution of contaminates from the chicken houses from that contributed by the cattle. Again, neither Bell nor Plaintiff did any sampling that perhaps could have established this absolutely critical aspect of Plaintiff's case.

Plaintiff offers two explanations for this failure to do any addition testing or sampling. First, Plaintiff suggests that it would be impossible to "go back in time" to duplicate the precise conditions on the Hudson Farm during the October 2009 to April 2010 time period. That argument is belied both by Plaintiff's allegation that there is a continuing violation on the Hudson Farm, as well as by common sense. In support of its continuing violation theory, Plaintiff argues in its post-trial memorandum that

> the Hudson CAFO discharged pollutants on April 9, 2010, five weeks after Plaintiff filed its Complaint. . . . Alan Hudson continued to grow chickens for Perdue in the poultry houses. The operation of the poultry houses continued to include running the fans, windrowing, and other activities requiring significant equipment and foot traffic out of the houses. The

> poultry production area continued to be drained by a swale and pipe to Ditch 1, and the ditch system continued to convey water and pollutants off the Hudson property and to the Franklin Branch.

ECF No. 203-1 at 25. If pollutants were continuing to come off of the Hudson Farm, Plaintiff could have easily conducted sampling to determine if the poultry operation was the source of that pollution. Furthermore, if Plaintiff was concerned that conditions on the property might somehow have been altered to point away from the poultry operation as the source of the contaminants, the "wealth of documentary and photographic evidence" of the conditions on the Hudson Farm during the relevant time period to which Plaintiff points, ECF No. 203-1 at 3, would have rendered any alteration readily discernible.

Plaintiff's second argument for not doing the necessary sampling to prove its case is somewhat astonishing. When asked during closing argument why the testing was not done, counsel responded that Waterkeeper is "not made of money" and that the testing would have been too expensive. Given the significant amount of resources that Plaintiff has expended on this litigation, coupled with the foreseeable resource expenditures imposed on Defendants, as well as the time and effort imposed on the Court, it borders on indefensible that Plaintiff would not have conducted the straightforward testing and sampling that

could have established a discharge from the poultry operation, if there was such a discharge.

Without that sampling, the substance of Bell's opinion is nothing more than: poultry fans can emit dust; poultry dust can contain litter; poultry litter can contain certain pollutants; and, because those pollutants were found in the water exiting the Hudson Farm, some of those pollutants must have come from the poultry operations.

One additional aspect of Bell's expert opinion warrants comment. In order to minimize the contribution of cows to the discharge from the Hudson Farm, Bell opines that, from his analysis of the MDE sample results, the topography of the Hudson Farm, and the evidence concerning the areas used by cows, the sample results from HF06 would give a good estimate of what the cow contribution, by itself, would be. Bell, Tr. 5A at 52. The MDE January 26, 2010, sample results showed fecal coliform and E. Coli in the samples taken from HF06 in an amount that is roughly one fifth of that in the samples taken from HF02. Bell concludes that, because a portion of a cow pasture (Field 15) drains into Ditch 1 above HF02 and a similar portion of another field (the Cow Pasture) flows into Ditch 6 above HF06, the cow contribution to both would be the same and, thus, the primary contribution of pollution measured at HF02 must have come, not

from the cows, but from the poultry operation. Bell, Tr. 5A at 51-52.

The Court finds several flaws in the conclusions drawn by Bell from the HF06 samples. First, as demonstrated on cross-examination, Bell overestimated the degree of accuracy obtainable from the topographic data he was using. Bell, Tr. 5A at 81-84. More significantly, however, Bell's analysis largely ignores the cow contribution from the drainage area at the head of Ditch 3. In contrast to the field near HF06, this is an area where all of the cattle traverse several times a day, the ground is compacted, and there is little, if any, vegetative buffer between that depression and Ditch 3. In addition, as mentioned above, the cow manure in this area is in direct contact with the stormwater. While in answer to a question as to the cow contribution to HF06, Bell hypothesized that part of the barnyard "sheds sort of in this direction [to HF06], away from that depressed area or depression area," Bell, Tr. 5A at 52, the Court concludes, as discussed above, that water from this barnyard area clearly flows to Ditch 3 and HF02.

To counter Bell's "pathway" theory, Defendants offered the testimony of their expert witness, Charles Hagedorn. The Court also found Hagedorn to be credible and forthcoming. Unlike Bell, however, Hagedorn is an academic researcher and scientist who is not at all dependent upon courtroom appearances as a paid

expert. This proceeding was, in fact, the first time Hagedorn has served as an expert witness and, in the Court's view, this gives him added credibility. He also has no apparent ties to the poultry industry.

The Court also finds that, for the most part, Professor Hagedorn's expertise is more closely aligned with the critical issues in this case. Hagedorn is a tenured professor of Environmental Microbiology at Virginia Polytechnic Institute and State University and has taught there since 1986. He has published hundreds of articles and books, including, just last year, a book on microbial source tracking. Hagedorn is routinely called upon by government agencies and environmental groups to determine the sources of water pollution, especially in rural watersheds. He has experience tracking the sources of water pollution in the District of Columbia, 17 states, and five foreign countries.

On the issue of bacterial and nutrient content in the dust and in the air inside of chicken houses, Hagedorn offered the following testimony which the Court finds persuasive. Echoing the Just article, Hagedorn noted that the dust in poultry houses includes, not just litter and manure, but skin debris, feather debris, feed debris, dust from outside, and pollen. He opines that is composed "primarily of skin cells, skin debris, feather debris, and crystallized urine." Hagedorn, 8A at 42. He

acknowledged that the air in poultry houses would contain bacteria as well, but the most prevalent form would be the bacterial genus staphylococcus, not fecal bacteria. Id. at 43. Furthermore, as fecal bacteria enters the air, it quickly dies out - how quickly, again as noted in the Just article, depends on a number of variables related to the management of the poultry facilities. Id. at 44.

The survival rate of fecal bacteria is also tied to the size of the material, if any, to which it is attached. Free floating bacteria, Hagedorn testified, would die off almost immediately when exposed to oxygen in the air. Id. Attachment to minute particles of organic matter would offer only slightly more protection and that bacteria would die off almost as rapidly. The larger the particle to which the bacteria is attached, the longer it can survive, but also, the less likely it would remain suspended in the air and be emitted from the poultry houses. Id. at 44-45.

Hagedorn also testified regarding nutrients in the poultry house air and dust. While the dust would contain some nutrients such as nitrogen, phosphorous, and ammonia, the concentration of airborne nutrients would be much lower than that found in litter on the floor of a chicken house. Like bacterial concentrations, airborne nutrient levels would vary greatly based upon the management practices employed by the grower. Of significance,

during the relevant time period, the Hudson Farm treated all of the litter it used with a litter treatment, PLT, an acid that binds with nutrients and reduces the amount of ammonia that would otherwise be released into the air. Todd LaKites, Tr. 4A at 20. While the purpose of PLT is to reduce the ammonia level inside the houses to promote bird health, it also reduces the amount of airborne ammonia that could be emitted from exhaust fans. Hagedorn testified that, like bacterial levels, nutrient levels in the litter, dust, or air inside or outside of the Hudson Farm poultry houses could have been tested by various methods, some of which are very simple and inexpensive. Hagedorn, Tr. 8A at 41.

Assuming that some bacteria and nutrients are emitted by exhaust fans, Hagedorn described various obstacles that would have prevented those contaminates from reaching Ditch 1 or ultimately, the Franklin Branch. First, there is the continued natural die-off of bacteria on small airborne particles, as discussed above. Next, Hagedorn testified that the heavy vegetation in the swale would act as a natural biological filter for dust and nutrient molecules. Some nutrients are taken up directly by the plants and others will be consumed by a biofilm of microorganisms that cover the surfaces of the plants. Id. at 55-56. Particles that do not land on plants would encounter a "biological mat of microorganisms in the upper part of the soil

and in the thatch at the bottom of the plants. This biological mat contains trillions of different microorganisms per cubic inch." Id. at 56. These organisms also take up nutrients.

There is one aspect of Hagedorn's testimony that the Court would discount. Hagedorn testified that no surface water runoff would occur until the water table is at or near the surface. Hagedorn, Tr. 8A 72-73, 87 and 8B at 51. While that might be true in some general sense, i.e., that more rain would be able to soak into the ground when the water table is low, common experience recognizes that if rainfall is sufficiently heavy, surface runoff will occur regardless of where the water table might be. That said, as noted above, there was no testimony by anyone stating that they observed water ever actually flowing in the swale.

Given the minimal amounts of fecal bacteria and nutrients that would have escaped from the poultry houses and deposited in the swale and the significant obstacles to the transport of those materials and the survival of the bacteria, Hagedorn concluded that it is not likely that any bacteria or nutrients would have reached Ditch 1. Hagedorn, Tr. 8A at 61-62. Assuming, however, that some minute particles did enter Ditch 1, Hagedorn testified that many of the same obstacles that operated in the swale would operate in the ditch, which is also heavily vegetated. Id. at 66. In addition, Hagedorn testified that

there is a "very large biological mat" of microbes and algae present in the ditch water. Id. at 68. This enormous population of microbes and algae would also take up nutrients and the enzymes would further degrade any dust molecules. Id. at 69. These mechanisms would further prevent any bacteria or nutrients from the poultry houses from reaching the Franklin Branch or the Pocomoke River. The Court notes that even in the short distance between HF02 and HF01, there is a significant decrease in the levels of fecal bacteria and nutrients. See, supra, at 15.

Given the minimal amounts of bacteria and nutrients that are emitted from the chicken houses and the obstacles to their survival and transport, Hagedorn concluded that the poultry operations on the Hudson Farm did not contribute to the sampling results obtained by MDE or Waterkeeper. Instead, Hagedorn pointed to the cow manure as the cause of the pollution observed.[10]

[10] Hagedorn also pointed to the approximately 150,000 gallons of urine that the cattle on the Hudson Farm would deposit on the landscape each year, urine that would contain high levels of nitrogen. Hagedorn, Tr. 8A at 79-80. Plaintiff objected to this evidence on the ground that Hagedorn did not disclose cow urine as a factor in his expert report. The Court agrees that this is a sufficiently new area of testimony and will not consider it. Given that a full grown cow can drink close to 100 gallons of water per day, Hudson, Tr. 6B at 85, the Court could perhaps take judicial notice that cows will leave a considerable amount of urine on the landscape. The nutrient content of that

Plaintiff's primary attack on Hagedorn's testimony and conclusions is that if, as Hagedorn conceded, pollutants from cow manure are subject to the same obstacles as pollutants from chicken manure, there would be no pollutants, at all, in Ditch 1 if Hagedorn's conclusions were valid. ECF No. 203-1 at 34-35. On that basis, Plaintiff characterizes Hagedorn's conclusion as absurd. Id. Plaintiff's argument, however, completely ignores the fundamental differences between the chicken litter and the cow manure on the Hudson Farm.

The first and most obvious of these differences is the sheer volume of cow manure - a ton and one half per day - compared to the tiny amount that might escape the chicken house by fan, foot, or tire. While not all of that manure is generated in the drainage basin of Ditch 3, much of it is, given the barnyard area located at the end of Ditch 3 where all of the cows traverse several times each day. Not only is there far, far more cow manure, the particle size is much larger, and the ability of bacteria to survive or nutrients to be absorbed can be a function of particle size. In addition, unlike the swale, the ground in the barnyard area (where the cow manure is observed in direct contact with the water) is heavily compacted, limiting absorption into the ground. Unlike the swale, the

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urine, however, is probably beyond the scope of that judicial notice.

ground between the barnyard area and the head of Ditch 3 is not heavily vegetated. Also, unlike the swale, water was actually observed in the barnyard and in Ditch 3.

In addition to what happens in the ditches on the Hudson Farm, the parties offer very different views as to what happens to the water from Ditch 1 and any pollutants that it carries once that water leaves the farm. On this issue, the Court generally agrees more with Plaintiff and Dr. Bell. Maps of the region, both current and historical, showing the Franklin Branch and its prongs, along with the testimony of witnesses as to the flow of water from Ditch 1 and under Route 50, and photographs showing that flow, all establish a clear hydrological connection between Ditch 1 and the Pocomoke River, at least during the relevant time period. Defendants' counter-argument that downed trees or partially clogged culverts prevent the water in a river's tributary from reaching that river is without support and runs counter to common experience. Similarly, Defendants' reliance on the fact that some maps show Prong 2 of the Franklin Branch as an intermittent stream is unavailing, given the undisputed testimony that the weather was exceptionally wet during the relevant time period.

While the Court would agree that the water in Ditch 1 will eventually reach the Pocomoke River, the degree to which the nutrients and bacteria would complete that journey is not clear.

Bell testified that, particularly with regard to the nutrient levels, there would not be a significant reduction in the 3.5 miles to the Pocomoke River. Bell, Tr. 5B at 18-19. As to bacteria, Bell opined that at least 10 to 15 percent would survive and reach the Pocomoke. Id. at 21. While Defendants counter that downed trees and the other obstacles identified by Hagedorn would slow down the transport of nutrients and bacteria and decrease the survivability of bacteria, the Court concludes that given the significantly high levels of nutrients and bacteria measured as the water leaves the Hudson Farm, some of those contaminants would reach the Pocomoke River.

III. CONCLUSIONS OF LAW

A. Standing

As an initial matter, the Court must address Plaintiff's standing to bring this action. "An association has standing to sue on behalf of its members when its members would otherwise have standing to sue in their own right, the interests at stake are germane to the organization's purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit." Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., 528 U.S. 167, 181 (2000). An association with members that are other associations has standing to sue when one or more member associations would have

standing to sue based on their individual members. New York State Club Ass'n v. City of New York, 487 U.S. 1, 9 (1988).

For an individual to have standing, three elements must be established. First, the plaintiff must have suffered an "injury in fact" - an invasion of a legally protected interest which is (a) concrete and particularized, and (b) "actual or imminent, not "conjectural" or "hypothetical." Lujan v. Defenders of Wildlife, 504 U.S. 555, 561 (1992) (citations and quotations omitted). Second, there must be a causal connection between the injury and the conduct complained of - the injury has to be "fairly ... trace[able] to the challenged action of the defendant." Id. Third, it must be "likely," as opposed to merely "speculative," that the injury will be "redressed by a favorable decision." Id. In the context of suits alleging environmental damage, an individual plaintiff satisfies the injury in fact prong of standing if "they use the affected area and are persons 'for whom the aesthetic and recreational values of the area will be lessened by the challenged activity.'" Laidlaw, 528 U.S. at 183 (quoting Sierra Club v. Morton, 405 U.S. 727, 735 (1972)). That individual's reasonable fear and concern about the effects of the challenged activity must be supported by objective evidence and directly affect the individual's recreational interests. Friends of the Earth, Inc.

v. Gaston Copper Recycling Corp., 204 F.3d 149, 161 (4th Cir. 2000) (Gaston I).

Phillips, Paulsen, Carlson, and Harvey are all members of ACT and ACT is a member of Waterkeeper. Phillips and Paulsen are also individual members of Waterkeeper as well. Each of these individuals testified that they recreate on the Pocomoke River and that their enjoyment of that recreating has been lessened by their understanding of the manner in which the Hudson Farm was polluting the Pocomoke. They also testified that their concerns would be remedied if pollution issues from the Hudson Farm were addressed.

The primary challenge to standing argued by Defendants is that the places where the standing witnesses recreate are too distant from the relevant zone of discharge. In support of that argument, Defendants rely on Friends of the Earth, Inc. v. Gaston Copper Recycling Corp., 629 F.3d 387 (4th Cir. 2011) (Gaston III), in which the Fourth Circuit held that "[p]laintiff[s] claiming injury from environmental damage must use the area affected by the challenged activity and not an area roughly 'in the vicinity of it.'" Id. at 397 (quoting Lujan, 504 U.S. at 565-66). In the Gaston litigation, the defendant discharged water from a storm water treatment facility into a lake on his property, the lake's water overflow discharged into a branch, and that branch was a tributary of a creek which

flowed into the North Fork of the Edisto River. Gaston III, 629 F.3d at 391. The distance from the defendant's discharge to the creek's confluence with the Edisto River was about 16.5 miles. After the plaintiff whose property was significantly closer to the point of discharge and on whom standing had been based died during the course of the litigation, the Fourth Circuit considered whether the plaintiffs continued to have standing through two other individual plaintiffs and remanded the case to the district court to determine factual issues related to standing. Friends of the Earth, Inc. v. Gaston Copper Recycling Corp., 263 Fed. Appx. 348 (4th Cir. 2008) (Gaston II).

In remanding the case, the Fourth Circuit instructed, that the plaintiffs "were not required to present evidence of actual harm to the environment so long as a direct nexus existed between the plaintiffs and the 'area of environmental impairment.'" Id. (quoting Gaston I, 204 F.3d at 159). The court concluded, however, that the plaintiffs were required to show that the plaintiffs on whom standing was to be based "used the area affected by the challenged activity, and that use of "an area roughly in the vicinity" of the affected area was insufficient. Id. at 355 (quoting Lujan, 504 U.S. at 565-66).

On remand, the district court found that one of the plaintiffs, Jones, used the area at the confluence of the Edisto River and the creek and, on that basis, concluded there was

standing. On appeal of that decision, the Fourth Circuit concluded that, based on its determination in Gaston I that the waters at the confluence were impacted by the discharges from the defendant's facility, they were able to conclude that that plaintiff used an "area affected by the challenged activity" rather than "an area roughly in the vicinity of it." 629 F.3d at 397. "In view of Jones' use of the waters in this area, and his reasonable concern that runoff from Gaston's facility is polluting the waters in that area, we hold that the plaintiffs asserted an injury in fact through their member Jones and established standing to prosecute this suit." Id. The Gaston III decision turned on a previous determination in Gaston I that the discharge from defendant's facility "affects or has the potential to affect the waterway for 16.5 miles downstream" from that facility. Gaston I, 204 F.3d at 158. Here, because Plaintiff's standing requires a similar finding that the challenged discharge reached the confluence of the Franklin Branch and the Pocomoke River, the standing issue becomes somewhat intertwined with the merits of Plaintiff's claim.[11]

Phillips testified that she kayaked at the confluence of the Franklin Branch and the Pocomoke which is about 3.5 miles

[11] That issues of standing and issues going to the merits of a claim become intertwined is not unusual. See Charles Alan Wright, Arthur Miller, Edward Cooper, Federal Practice and Procedure § 3531.15 at 331-333 (2008).

from the Hudson Farm and at the confluence of the Timmonstown Branch and the Pocomoke River which is about 4.5 miles from the Hudson Farm. Other standing witnesses stated that they recreated on the Pocomoke anywhere from 7 to 28 miles from the Hudson Farm. Were the facts as Plaintiff allege and the Hudson Farm poultry operation the cause of the high readings of levels of bacteria and nutrients discharged from the Hudson Farm, Plaintiff could make a reasonable case that the discharge from the poultry operation affected, at least, the area near the confluence of the Franklin Branch and the Pocomoke River. As noted above, Bell testified that much of the nutrient load found in the Waterkeeper samples and as much as 10 to 15 percent of the bacteria would have made it at least to the confluence.[12] At least one of the standing witnesses testified that she kayaked at that confluence and on that basis, the Court finds Plaintiff has standing.

B. Violation of the Clean Water Act

In a previous memorandum opinion issued in this action, this Court set out the regulatory and permitting scheme for

[12] While the Court concludes that Plaintiff has not established that any of the nutrients or bacteria in those samples came from the poultry operation, see infra, that issue is best resolved as an issue going to the merits rather than as an issue of standing. See Sunrise Corp. of Myrtle Beach v. City of Myrtle Beach, 420 F.3d 322, 325 n.1 (4th Cir. 2005) (where challenge to the plaintiffs' standing was that there was no injury in fact, which was also element of the plaintiffs' claim, court should have addressed the issue as an attack on the merits).

CAFOs under the Clean Water Act. Assateague Coastkeeper v. Alan and Kristen Hudson Farm, 727 F. Supp. 2d 433, 445-36 (D. Md. 2010). That discussion will not be repeated here. Briefly stated, however, the CWA prohibits the "discharge" of pollutants from a "point source" to "waters of the United States," except as authorized by a permit issued under the National Pollution Discharge Elimination System (NPDES) program. Id. at 444; 33 U.S.C. §§ 1311, 1342, 1362. Although there is some disagreement as to which specific portions of the Hudson Farm are encompassed in its production area, there is no disagreement that the poultry operation on the Hudson Farm is a CAFO and a point source under the CWA. See 33 U.S.C. § 1362(14); 40 C.F.R. § 122.23. While, as noted above, Defendants attempted to argue to the contrary, the Court finds that water from Ditch 3 flows into the Franklin Branch which in turn flows into the Pocomoke River, which is one of the waters of the United States. The Court will assume, arguendo, that Mr. Hudson did not have a permit during the relevant time period although, on this issue, Defendants have made a compelling argument.

The Court concludes, however, that Plaintiff has not established the alleged CWA violation because Plaintiff has failed to establish that there was a discharge from the poultry operation. On the issue of whether there was such a discharge, Plaintiff had the burden of proof by a preponderance of the

evidence. Coeur D'Alene Tribe v. Asarco, Inc., 280 F. Supp. 2d 1094, 1102 (D. Idaho 2003). "The burden of showing something by a 'preponderance of the evidence,' the most common standard in the civil law, simply requires the trier of fact to believe that the existence of a fact is more probable than its nonexistence before he may find in favor of the party who has the burden to persuade the judge of the fact's existence." Moberly ex rel. Moberly v. Secretary of Health and Human Servs., 592 F.3d 1315, 1322 n.2 (internal quotations omitted).

The Court would agree that it is possible that some particle of chicken litter made its way out of the house, into the swale, through the swale pipe, into Ditch 1, off the Hudson Farm and into the Franklin Branch. It is also possible that, if Plaintiff had done appropriate testing on the Hudson Farm, they could have found evidence of that discharge. As Plaintiff notes, Defendants' expert witness readily concedes that it "was possible" that pollutants could be released from the chicken houses. ECF No. 203 at 33 (citing Hagedorn, Tr. 8B at 15-17). That such pollution is possible, however, does not satisfy the preponderance of evidence standard.

As Perdue notes, the evidence offered here in support of Plaintiff's claim stands in sharp contrast to the evidence presented in every reported case involving discharge from a CAFO in violation of the CWA. ECF No. 204 at 12 n.8 (citing

Concerned Area Residents for the Envt. v. Southview Farm, 34 F.3d 114, 117-118 (2d Cir. 1994); Am. Canoe Ass'n v. Murphy Farms, Inc., 412 F.3d 536, 538 (4th Cir. 2005); Idaho Rural Council v. Bosma, 143 F. Supp. 2d 1169, 1176 (D. Idaho 2001); Community Ass'n for Restoration of the Envt. v. Henry Bosma Dairy, 65 F. Supp. 2d 1129, 1148 (E.D. Wash. 1999); Higbee v. Starr, 598 F. Supp. 323, 331 (D. Ark. 1984)). In each of those decisions, there was an observed discharge. For example, in Southview Farm for one of the discharges that the appellate court found to be a proven violation, immediately after two of the plaintiffs observed the defendant spreading liquid manure on a particular field, they "observed liquid manure flowing into and through a swale [on the defendant's farm] and through a drain tile leading directly into a stream which ultimately flows into the Genessee River". 34 F.3d at 117. In response to the defendant's argument that the plaintiffs offered no direct eyewitness testimony of manure actually leaving the farm on two other dates, the appellate court found that the plaintiff had made out a "strong circumstantial case" for violations on those dates, as well, because they made detailed observations of defendant spreading manure in the same manner in the same field as on the day the manure was observed leaving the farm. Id. at 120.

Similarly, in Henry Bosma Dairy, a third party gave eyewitness testimony that he observed, on several occasions, a pipe from the defendant's farm "spilling green-brown manure water" into a canal that the court had determined to be the waters of the United States. 65 F. Supp. 2d at 1148. In Idaho Rural Council, a witness stated in an affidavit that "he observed a steady flow of polluted surface runoff" from the defendant's farm into a spring that the court had determined met the definition of waters of the United States. This runoff included "syringes, examination gloves, mastitis tubes, and manure." Id.

The Court is not implying by citing these cases that there must always be an eyewitness to a discharge in order for a CWA violation to be established. In the case at bar, the Court could readily envision finding a violation without eyewitness testimony of an observed actual discharge had there been any testing or sampling tailored to measure the contribution of the poultry houses. Plaintiff, however, cannot require the Court to ignore the obvious source of the discharge in favor of a source tied to the discharge by a string of possibilities.

Having found insufficient proof of any discharge from the poultry houses, the Court must briefly address an issue raised by Plaintiff in what strikes the Court as a rather puzzling footnote. ECF No. 206 at 5 n.2. Plaintiff states in that

footnote that, "[d]ue to the overwhelming evidence that the poultry production contributed pollutants to the discharge from Ditch 1, Plaintiff has not summarized the evidence establishing that even if the pollution was solely due to pollution from the cows, this would still be a CWA violation but those facts exist in the record." Id. (emphasis in original). While Plaintiff mentioned some months ago in another footnote[13] that it "retains the right to present evidence at trial that the cows are confined within the meaning of the regulations and that discharges from the cows are, indeed, violations of the CWA," Plaintiff has never seriously advanced the Hudson Farm cows as a basis of CWA liability. What is even more puzzling about this footnote is that Plaintiff asserts that "liability for the violations [solely due to pollution from the cows] flows to both Defendants as a result." ECF No. 206 at 5 n.2 (emphasis added by Court).

Regardless of whether the discharge from the Hudson Farm cattle operation might be a CWA violation, there is certainly no evidence in the record on which Plaintiff could support the conclusion that Perdue would be liable for that violation. There is no evidence that Perdue had anything to do with the Hudson Farm cattle operation. Furthermore, Plaintiff can assert

[13] This footnote was in its opposition to Defendants' motions for summary judgment, ECF No. 127 at 19 n.116.

no liability in this action arising out of the cattle operation because to do so would be inconsistent with the CWA's notice provisions. As the Court explained more fully in its memorandum denying Defendants' motions to dismiss, under the CWA, a plaintiff must provide 60 days' notice to the EPA, the State where the alleged violation occurred, and the alleged violators before filing suit. 727 F. Supp. 2d at 437; 33 U.S.C. § 1365(b). In the notice, a plaintiff must "provide the alleged violator with enough information to attempt to correct the violation and avert the citizen suit." Gaston III, 629 F.3d at 400; see also 40 C.F.R. § 135.3(a). As the Court noted in its letter order denying the parties' cross motions for summary judgment, any claim under the CWA based upon discharges from the cattle operation would be beyond the scope of the Notice of Intent, which was clearly limited to poultry waste. ECF No. 143 at 3; see Compl., Ex. A at 1 (citing "discharge of pollutants associated with poultry waste" as the CWA violation).

For all these reasons, the Court concludes that Plaintiff has not established a violation of the Clean Water Act. Having reached that conclusion, there are a number of other issues raised by the parties that the Court need not reach, such as: whether the swale was part of the production area, whether the alleged discharges were exempt agricultural stormwater

discharges, or whether Plaintiff has proven a continual violation.

There is one remaining issue that the Court will briefly address both because the parties devoted so much attention to the issue and because it was the central focus of Plaintiff's litigation strategy. That issue is whether Perdue could be held liable as an operator had the Court found a CWA violation based upon a discharge from the poultry operations on the Hudson Farm. While in the current posture of this case the conclusion is certainly dicta, the Court concludes that there was insufficient evidence to impose CWA liability on Perdue.

In denying Perdue's motion to dismiss, the Court recognized that integrators can, under certain circumstances, be subject to the CWA as an operator of a CAFO. 727 F. Supp. 2d at 442. In order to be deemed an "operator" of a polluting facility, however, a person or entity "must manage, direct, or conduct operations specifically related to pollution, that is, operations having to do with the leakage or disposal of hazardous waste, or decisions about compliance with environmental regulations." United States v. Bestfoods, 524 U.S. 51, 66-67 (1998) (emphasis added). Although Plaintiff introduced evidence that Perdue gave extensive advice and instruction to its growers and, in many ways, regulated the growers' activities; that advice, instruction and regulation

related primarily to bird health and product quality and not environmental compliance. That type of control exercised by Perdue does not provide a basis for imposing CWA liability.

There was evidence, however, that some of Perdue's advice to its growers was related to environmental concerns. That evidence related to a "Clean Water Environmental Initiative" that was part of a program in which Perdue entered into a memorandum of understanding with the EPA to promote environmental stewardship and training with its growers. Under that program, Perdue personnel received training from the EPA relating to environmental compliance and the use of best management practices and Perdue, in turn, educated its growers on those issues. Plaintiff sought to use the training material prepared by Perdue as part of this program, Pl.'s Ex. 462, as a means to impose CWA liability on Perdue.

While the undersigned has not hesitated to criticize Perdue and impose liability on Perdue for violation of a federal statute when appropriate, see Heath v. Perdue Farms, Inc., 87 F. Supp. 2d 452 (D. Md. 2000) (finding that Perdue willfully violated the Federal Fair Labor Standards Act), in this instance, the evidence at trial would suggest that Perdue should be commended, not condemned. Perdue appears to have tried to take the lead in addressing some of the very issues about which Plaintiff is concerned. It also appears that Perdue suspended

this effort, at least in part, because of concerns related to this litigation and concerns that Plaintiff would do just as it has done, i.e., attempt to use the Initiative as proof of control and as a basis of liability.

IV. CONCLUSION

The Court has no disagreement with Plaintiff that the Chesapeake Bay is an important and vital resource, that it is seriously impaired, and that the runoff from factory farms, including poultry operations, may play a significant role in that impairment. Nor does the Court disagree that citizen suits under the Clean Water Act can play a significant role in filling the void where state regulatory agencies are unable or unwilling to take appropriate legal action against offenders. When citizen groups take up that mantle, however, they must do so responsibly and effectively. The Court finds that in this action, for whatever reason, Waterkeeper did not meet that obligation.

Finding that Plaintiff has not shown, by a preponderance of the evidence, that the poultry operation on the Hudson Farm has discharged pollutants into the waters of the United States, the Court will enter judgment against Plaintiff and in favor of Alan

Hudson and Perdue. A separate order will issue.

/s/
William M. Nickerson
Senior United States District Judge

DATED: December 20, 2012

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND

WATERKEEPER ALLIANCE, INC. *
*
v. *
* Civil Action No. WMN-10-487
ALAN HUDSON et al. *
*

* * * * * * * * * * * * * * * *

ORDER

In accordance with the accompanying Findings of Fact and Conclusions of Law, and for the reasons stated therein, IT IS this 20th day of December, 2012, by the United States District Court for the District of Maryland, ORDERED:

1) That judgment is entered in favor of Defendants, Alan Hudson and Perdue Farms, Inc., and against Plaintiff, Waterkeeper Alliance, Inc.;

2) That any and all prior rulings made by this Court disposing of any claims against any parties are incorporated by reference herein and this order shall be deemed to be a final judgment within the meaning of Fed. R. Civ. P. 58;

3) That this action is hereby CLOSED; and

4) That the Clerk of the Court shall transmit a copy of the Findings of Fact and Conclusions of Law and this Order to all counsel of record.

/s/
William M. Nickerson
Senior United States District Judge

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND

WATERKEEPER ALLIANCE, INC.	*	
	*	
v.	*	
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/s/
William M. Nickerson
Senior United States District Judge