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The FDEP's Oversight of Dairy Farms after Hurricane Irma

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In August 2018, we issued a [report](#) that considered the impact of Concentrated Animal Feeding Operations (CAFOs) upon the nutrient levels seen in Lake Okeechobee and the surface waters connected to the lake. On page 12 of the report we noted that the Florida, Department of Environmental Protection (FDEP) has issued permits to 31 CAFOs that are located in the immediate vicinity of Lake Okeechobee and that 14 of these facilities are located in Okeechobee County, immediately upgradient of the lake. These permits allow over 89,000 dairy cattle to be used for milk production in the region. (Report, page 14) Moreover, these cattle produce over 744 billion pounds of manure each year. (Report, pages 15-16) Liquid waste is estimated to exceed over 10 million gallons each day. (Report, page 17) Nutrient levels associated with these facilities are particularly high, with over 23 and 8 million pounds of nitrogen and phosphorus respectively produced each year, and the greatest percentage is produced in Okeechobee County (Report, pages 18-19).

There has been considerable discussion this year about the need to clean up Florida's surface waters, and the discussion has been elevated because of this year's explosion of blue-green algae blooms in Lake Okeechobee, and the surface waters connected to the lake. The expansion of these blooms is now becoming an almost annual occurrence, as the Weather Channel [reported in 2016](#). These blooms are caused by a combination of factors, the most influential being the [discharge of nutrients](#) (nitrogen and phosphorus) into surface waters. When these nutrients exist in waterbodies that are slow-moving and are combined with abundant sunlight the conditions are ripe for [harmful blooms](#). Florida's rivers and abundant sunshine thus provide exactly the type of conditions that support algae blooms, provided the necessary nutrients, phosphorus in particular, are available to light the spark necessary to begin their growth and expansion.

Rainfall Associated with Hurricane Irma

Given what is now known about the massive discharges of nutrients just north of Lake Okeechobee, it is reasonable to look into the FDEP’s response to major rain events that would facilitate the delivery of these nutrients to Lake Okeechobee. Unfortunately, [Hurricane Irma](#), which struck Florida on September 10, 2017, provided exactly the type of mechanism needed to transport nutrients to Lake Okeechobee and its tributaries, because the path that it took brought excessive rainfall and flooding to that part of the state. The South Florida Water Management District (SFWMD) began immediate aerial reconnaissance of the region after receiving reports of excessive rainfall throughout. The SFWMD was [concerned](#) that the rainfall and accompanying winds could have uprooted, among other things, aquatic vegetation known to naturally absorb phosphorus. On September 12, 2017, the [Palm Beach Post](#) reported that initial rainfall totals generally exceeded 6 inches in Palm Beach, Broward, Miami-Dade, Hendry, and Glades County, with individual locations receiving greater amounts. Glades County alone is home to a large CAFO, Graham Farms, that houses more than 3,000 dairy cattle. Meanwhile, the University of Florida [reported](#) that there were heavy agricultural losses in Hendry and Glades Counties, and that, “[s]tanding water is a challenge for agricultural producers throughout the entire peninsula. Flooding has blocked access to fields and groves and limited access to beef cattle in pastures marooned by the storm. In east Florida’s Brevard County, for example, an estimated 50,000 acres of ranchland is under water, likely imposing a weight loss in calves shipped for processing.” Nine months later, on June 30, 2018, the National Hurricane Center issued its report on the storm and [concluded](#) (page 12) that “Irma produced heavy rain across much of the state of Florida, and rainfall totals of 10 to 15 inches were common across the peninsula and the Keys (Fig. 12). The maximum reported storm-total rainfall was near Ft. Pierce, Florida, in St. Lucie

County, where 21.66 inches of rain was measured between 9 and 12 September. The heavy rainfall caused flooding of streets and low-lying areas across much of the Florida peninsula.”

The South Florida area, including Okeechobee County, has long known about the effects that tropical weather has on the region. In late August 2012, [tropical storm Isaac](#), blew through the Florida Keys to the south of Lake Okeechobee. Despite Isaac being only a minimal tropical system, Okeechobee County (which is over 200 miles to the north of Key West) suffered [significant flooding](#). This event brought [anecdotal reports](#) of repeated flooding to farms after Isaac, and also spotlighted negative impacts from routine rain events. Six years later, Hurricane Irma came much closer to the county and produced significantly worse results. On September 13, 2017, just days after the storm struck, the *Okeechobee News*, [reported](#) that Hurricane Irma’s center passed 50 miles to the west of the county, and that over a 48 hour span, the county received 16.50 inches of rainfall. *WPTV* in West Palm Beach, [reported](#) that flooding occurred at a ranch in Okeechobee County following the breach of a dike that was holding back floodwaters. 90 percent of the county was without power, and the Southeast Farm Press reported that [dairies were losing power](#) in the county. 14 CAFOs with over 45,000 dairy cattle were located in Okeechobee County when this disaster hit.

All of this meant, as Dr. Jeff Masters [reported](#) on September 28, 2017, that Lake Okeechobee was expected to reach its highest level in 10 years. And the increased levels would ultimately lead to degradation of the water in the lake and in the nearby surface waters when the Army Corps of Engineers released lake water to control water levels. Just two months after Hurricane Irma struck, the University of Florida warned that dissolved oxygen levels had dropped in the St. Johns River (to the north) and that Florida’s Biscayne Bay (to the south) was showing signs of hypoxia. [It stated that](#), “NOAA scientists measuring water quality in the region

noticed elevated levels of chlorophyll (an indicator of algal biomass), and areas of hypoxia which are generally unusual for the bay.”

It was thus expected that Hurricane Irma would have a tremendous impact on the South Florida region—including include areas with ongoing CAFO operations. And given this impact one would expect that Florida’s, DEP, the lead agency charged with oversight of environmental issues in the state, would have been aggressively involved in monitoring the negative impacts to the region’s environment. Unfortunately, such was not the case.

Hurricane Irma and 25-year/24-hour Storm Events

Each of the 31 CAFO permits allows a surface water discharge only in the event of a major precipitation event. Otherwise, discharges are prohibited. The language discussing this issue is typically the same in each of the permits, and reads as follows:

“Discharge of manure or process wastewater to surface waters of the State are prohibited except when precipitation causes a discharge, provided the facility is designed, constructed, operated and maintained to contain all manure, process wastewater, runoff from the production area, and the direct precipitation from a 25-year/24-hour rainfall event, and that the permittee is meeting the otherwise no-discharge storage standard, related additional measures, and record keeping requirements in accordance with the Effluent Limitations Guidelines (ELGs) established by 40 CFR Parts 412.33 and 412.37.

In the event of a discharge from Outfall D-001, the effluent shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.E.3:”

(Permit condition A.1. found in the permit for the Basinger Farm Dairy, Okeechobee County, Permit Number FLA138983-004) The permits then require that the facility notify the FDEP of the total volume of the discharge, the duration of the discharge and the average daily flow that was experienced. (Permit condition A.1. found in the permit for the Basinger Farm Dairy, Okeechobee County, Permit Number FLA138983-004)

With this in mind, we looked at what amount of rainfall would typically constitute a “25-year/24-hour rainfall event” such as is described in the above permit language. This information can be found in the database maintained by the National Oceanic and Atmospheric Administration (NOAA) for each of the seven counties in which these CAFO facilities are found. The counties involved are Desoto, Glades, Hardee, Highlands, Manatee, Okeechobee, and St. Lucie. The following table provides the [amount of rainfall](#) that NOAA considers to be the average equivalent that would meet such major events. The NOAA estimates are based upon a 90% confidence level and, according to NOAA, may be higher or lower than the quoted levels by as much as 5%. The table below shows NOAA’s estimates for 25-, 50-, and 100- year storm events. The reader will note that daily rainfall totals constituting a major event increase as the period covered increases, signifying the higher level of destruction caused by storm events that occur less frequently.

County	Expected in a 25-year/24-hour Rainfall Event (in inches) NOAA Estimate of Amount of Rainfall	Expected in a 50-year/24-hour Rainfall Event (in inches) NOAA Estimate of Amount of Rainfall	Expected in a 100-year/24-hour Rainfall Event (in inches) NOAA Estimate of Amount of Rainfall
Desoto	7.26	8.41	9.65
Glades	7.60	8.81	10.1
Hardee	8.03	9.35	10.8
Highlands	7.16	8.27	9.45
Manatee	8.78	10.4	12.2
Okeechobee	7.07	8.14	9.29

St. Lucie	9.90	11.5	13.3
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When we consider that, according to the National Hurricane Center, rainfall rates of between 10 and 15 inches were common in this region due to Hurricane Irma, *it is clear that each of these counties experienced rainfall rates that were more on the level of a 100-year storm*, which is far worse than the 25-year/24-hour events for which the CAFO permits expected each CAFO facility to be able to withstand. The Nutrient Management Plans provided by the facilities assured the FDEP that the wastewater systems were designed to withstand 25-year/24-hour rainfall events, as required by the FDEP’s rules. However, the ability to withstand heavier rainfall events were not part of the assurances. Consequently, one would expect to have seen major flooding in the region, just as occurred according to the anecdotal reports seen after the storm passed. This type of event would also reasonably be expected to have caused significant discharges of highly polluted, nutrient-laden wastewater from these facilities into surrounding surface waters.

To be clear, the CAFO permits issued by the FDEP and now in effect do not prohibit discharges of wastewater into surface waters in situations such as we observed during and after Hurricane Irma. Consequently, assuming the facilities were otherwise in compliance with their permits, there would be no basis for the FDEP to initiate enforcement because of the discharged wastewater.¹ Nevertheless, the permits do require the facilities to advise the FDEP when discharges occur, and those were still in effect (or at least resumed) after Hurricane Irma struck.

¹ Further, on September 4, 2017, Governor Scott issued [Executive Order 17-235](#) that authorized state agencies to suspend the operation of administrative rules for a thirty (30) day period covering the landfall of and immediate recovery from Hurricane Irma, provided that the agency found that it was necessary to suspend the rules in order to prevent them from hindering or otherwise delaying activity necessary to cope with the emergency.

Consequently, the records later filed by the facilities should show the extent to which the flooding caused wastewater discharges from the facilities.

Reported Facility Discharges and Hurricane Irma

With that in mind, we reviewed facility files to identify those facilities that discharged to surface waters because of the widespread flooding experienced by Hurricane Irma. We specifically looked at the Discharge Monitoring Reports (DMRs) filed by the 31 CAFOs in October 2017, i.e. those that covered the time frame involved with the Hurricane Irma disaster.

What we found in reviewing the DMRs submitted by the facilities for the 3rd quarter of 2017² (the period covering July-September 2017) was that only 2 of them, the Farren Dakin Dairy and the Jerry Daiken Dairy (both of which are in Manatee County) reported any discharges as a result during the period. One facility’s DMRs (belonging to the H W Rucks Dairy—Barn #2) were not in Oculus because of what appears to be a clerical error. None of the remaining 28 dairies claimed to have had any discharges of waste from their dairies during the period in which Hurricane Irma struck. The situation reported by each of the dairies is found in the following table:

COUNTY	DEP OFFICE	FACILITY ID	NAME	9/2017 DMR Flow Report (MGD) ³
DESOTO	SD	FLA182648	Brighton Dairies, Inc. Barn #1	NOD
DESOTO	SD	FLA518611	Pine Island Dairy	NOD
GLADES	SD	FLA284629	The Graham Farms	0.00
HARDEE	SWD	FLA120081	V & W Farms, Inc	NOD
HARDEE	SWD	FLA120189	Melear Dairy #1 And #2	NOD
HARDEE	SWD	FLA182656	Crewsville Dairy, Inc.	NOD
HARDEE	SWD	FLA183075	Lake Branch Dairy	NOD

² In 3 cases the data was found on semi-annual reports filed by the dairies, no 3rd quarter reports being in the files.

³ The abbreviations used are: NOD=No Discharge, MNR=Monitoring Not Required, and NIF=Not in File

HARDEE	SWD	FLA183326	Zolfo Springs Dairy	MNR
HARDEE	SWD	FLA405582	Ten Mile Grade Dairy	NOD
HIGHLANDS	SED	FLA013660	Wabasso Road Dairy	NOD
HIGHLANDS	SED	FLA136557	Butler Oaks Farm Dairy	NOD
HIGHLANDS	SED	FLA136565	Bishop Brothers Dairy, Inc	NOD
HIGHLANDS	SED	FLA136590	Triple G Dairy	MNR
MANATEE	SWD	FLA182699	Cameron Dakin Dairy	NIF
MANATEE	SWD	FLA182966	Farren Dakin Dairy, LLC	0.438
MANATEE	SWD	FLA372986	Jerry Dakin Dairy	0.095
OKEECHOBEE	SED	FLA138908	P.W. Bishop Dairy, Inc.	NOD
OKEECHOBEE	SED	FLA138983	Basinger Farm Dairy	MNR
OKEECHOBEE	SED	FLA139076	Milking R Dairy	MNR
OKEECHOBEE	SED	FLA139092	C & M Rucks Dairy	MNR
OKEECHOBEE	SED	FLA139149	McArthur Farms Dairy - Barns 1 & 2	MNR
OKEECHOBEE	SED	FLA139165	H W Rucks Dairy-Barn #2	NIF
OKEECHOBEE	SED	FLA139173	H W Rucks Dairy-Barn #1 And #3	NOD
OKEECHOBEE	SED	FLA139203	Larson Dairy-Barn #5	NOD
OKEECHOBEE	SED	FLA139211	McArthur Farms Dairy - Barns 3 & 4 consolidated	NOD
OKEECHOBEE	SED	FLA139220	Davie Dairy - Barn #1 & #2	MNR
OKEECHOBEE	SED	FLA139246	Larson Dairy - Barn #8	MNR
OKEECHOBEE	SED	FLA139254	J.M. Larson, Inc., Barn #3	NOD
OKEECHOBEE	SED	FLA190560	J.M. Larson, Inc., Barn #4	MNR
OKEECHOBEE	SED	FLA447871	Burnham Farms, Inc.	MNR
ST. LUCIE	SED	FLA187577	Gracewood Dairy	MNR

If the dairies are to be believed, therefore, there were no discharges from their facilities during a rainfall event that was the equivalent of a 100-year event.⁴ Frankly, the claims defy belief.

Inspections Post-Hurricane Irma FDEP

One way of determining the veracity of the claims made in the DMRs would be to look at the extent to which the FDEP inspectors visited the facilities to view, first-hand, the extent to

⁴ Of course, this rainfall event was also accompanied by strong winds that would have further served to spread the flooding.

which the facilities were discharging as a result of Hurricane Irma’s rainfall. We therefore began reviewing and/or searching for inspection reports to see what the FDEP inspectors found. What we found was that the FDEP conducted no inspections of any of these facilities in the months of September and October 2017—either before or after the storm hit. The first inspection following the storm was on November 13, 2017. This was 64 days after the storm struck. In total, only 4 inspections were conducted between November 13, 2017, and the end of the year. With that in mind, the following table lists each CAFO, together with the date of the next inspection after Hurricane Irma (or the date of the last inspection conducted if none have been conducted since the hurricane struck):

COUNTY	DEP OFFICE	FACILITY ID	NAME	Date of Inspection after Irma (9/10/17) Or date of last inspection	Violations Found?
DESOTO	SD	FLA182648	Brighton Dairies, Inc. Barn #1	15-Jun-17	No
DESOTO	SD	FLA518611	Pine Island Dairy	17-May-18	No
GLADES	SD	FLA284629	The Graham Farms	17-Mar-16	No
HARDEE	SWD	FLA120081	V & W Farms, Inc	30-Mar-16	No
HARDEE	SWD	FLA120189	Melear Dairy #1 And #2	4-Apr-18	Yes
HARDEE	SWD	FLA182656	Crewsville Dairy, Inc.	27-Jun-16	No
HARDEE	SWD	FLA183075	Lake Branch Dairy	3-Mar-17	Yes
HARDEE	SWD	FLA183326	Zolfo Springs Dairy	18-Feb-16	Yes

HARDEE	SWD	FLA405582	Ten Mile Grade Dairy	3-May-16	Yes
HIGHLANDS	SED	FLA013660	Wabasso Road Dairy	28-Feb-18	No
HIGHLANDS	SED	FLA136557	Butler Oaks Farm Dairy	22-Mar-16	Yes
HIGHLANDS	SED	FLA136565	Bishop Brothers Dairy, Inc	9-Jan-18	No
HIGHLANDS	SED	FLA136590	Triple G Dairy	16-May-16	Yes
MANATEE	SWD	FLA182699	Cameron Dakin Dairy	20-Jul-17	Yes
MANATEE	SWD	FLA182966	Farren Dakin Dairy, LLC	26-May-15	Yes
MANATEE	SWD	FLA372986	Jerry Dakin Dairy	4-Sep-15	Yes
OKEECHOBEE	SED	FLA138908	P.W. Bishop Dairy, Inc.	9-Dec-16	No
OKEECHOBEE	SED	FLA138983	Basinger Farm Dairy	25-Apr-16	Yes
OKEECHOBEE	SED	FLA139076	Milking R Dairy	6-Jul-17	No
OKEECHOBEE	SED	FLA139092	C & M Rucks Dairy	30-Jan-18	No
OKEECHOBEE	SED	FLA139149	McArthur Farms Dairy - Barns 1 & 2	17-Feb-17	Yes
OKEECHOBEE	SED	FLA139165	H W Rucks Dairy-Barn #2	29-May-15	No
OKEECHOBEE	SED	FLA139173	H W Rucks Dairy-Barn #1 And #3	29-May-15	No
OKEECHOBEE	SED	FLA139203	Larson Dairy-Barn #5	12-May-17	No
OKEECHOBEE	SED	FLA139211	McArthur Farms Dairy - Barns 3 & 4 consolidated	17-Feb-17	Yes

OKEECHOBEE	SED	FLA139220	Davie Dairy - Barn #1 & #2	30-Apr-15	No
OKEECHOBEE	SED	FLA139246	Larson Dairy - Barn #8	17-Jan-18	No
OKEECHOBEE	SED	FLA139254	J.M. Larson, Inc., Barn #3	15-Nov-17	No
OKEECHOBEE	SED	FLA190560	J.M. Larson, Inc., Barn #4	15-Nov-17	No
OKEECHOBEE	SED	FLA447871	Burnham Farms, Inc.	13-Nov-17	Yes
ST. LUCIE	SED	FLA187577	Gracewood Dairy	23-Feb-16	No

The FDEP is an agency that is supposed to be engaged in prevention of water pollution. § 403.061(28), Fla. Stat., gives the agency the power to “[p]erform any other act necessary to control and prohibit air and water pollution, and to delegate any of its responsibilities, authority, and powers, other than rulemaking powers, to any state agency now or hereinafter established.” In carrying out its duties § 403.061, Fla. Stat., concludes by stating that: [t]he department shall implement such programs in conjunction with its other powers and duties and shall place special emphasis on reducing and eliminating contamination that presents a threat to humans, animals or plants, or to the environment.” When Hurricane Irma struck Florida the FDEP simply turned its head and looked elsewhere when it came to being on the scene and determining the extent to which the flooding brought about by the hurricane had resulted in discharges of wastewater from CAFOs into surrounding surface waters. Had it visited the facilities it would have been in a position to act vis-à-vis reducing the impact of these discharges that would eventually flow into Lake Okeechobee. This, in turn, would have enabled the FDEP to determine the extent to which, if any, existing permits needed to be revised and/or have stricter limits placed upon the ability of

these CAFOs to discharge their nutrient-laden waste into waters that would flow into Lake Okeechobee.

FDEP’s Enforcement of Violations

Inspection files in Oculus reveal violations observed by the FDEP at some of the facilities that the agency visited. The violations are described in the following table.

COUNTY	DEP OFFICE	FACILITY ID	FACILITY NAME	Date of Inspection after Irma (9/10/17) Or date of last inspection	Violations Found?	NATURE OF VIOLATIONS	Facility Marked “In Compliance”?
HARDEE	SWD	FLA120189	Melear Dairy #1 And #2	4-Apr-18	Yes	Monitoring well damaged, Monitoring wells not labeled.	Yes
HARDEE	SWD	FLA183075	Lake Branch Dairy	3-Mar-17— Conducted by EPA	Yes	Dead animals not buried properly.	No Final Rating Given
HIGHLANDS	SED	FLA136557	Butler Oaks Farm Dairy	22-Mar-16	Yes	Inadequate freeboard space in treatment lagoon. Inadequate amount of lagoon storage. Waste storage pond overgrown with vegetation. Waste storage pond insufficient to allow for accurate recording.	No
HIGHLANDS	SED	FLA136590	Triple G Dairy	16-May-16	Yes	Cap protecting monitoring well improperly sealed allowing contamination.	Yes
MANATEE	SWD	FLA182699	Cameron Dakin Dairy	20-Jul-17	Yes	Annual operating reports not filed. DMRs incomplete. Flow meter calibration records unavailable at time of inspection.	No--CAO ⁵
MANATEE	SWD	FLA182966	Farren Dakin Dairy, LLC	26-May-15	Yes	Staff gauge markings were not visible.	Yes
MANATEE	SWD	FLA372986	Jerry Dakin Dairy	4-Sep-15	Yes	Onsite flow meter was not operational, flow being estimated. Improper DMRs being used.	No—CAO
OKEECHOBEE	SED	FLA138983	Basinger Farm Dairy	25-Apr-16	Yes	Treatment lagoon berms not stabilized properly and showed signs of erosion. Groundwater monitoring	Yes

⁵ “No-CAO” is used to indicate that a compliance assistance offer was sent to the violator, as opposed to undertaking formal enforcement.

						wells overgrown with grass.	
OKEECHOBEE	SED	FLA139149	McArthur Farms Dairy - Barns 1 & 2	17-Feb-17	Yes	Unknown when flow meters were last calibrated, or whether they were being calibrated.	Yes
OKEECHOBEE	SED	FLA139211	McArthur Farms Dairy - Barns 3 & 4 consolidated	17-Feb-17	Yes	Staff gauge for Barn 4 not maintained. Unknown when flow meters were last calibrated, or whether they were being calibrated.	Yes
OKEECHOBEE	SED	FLA447871	Burnham Farms, Inc.	13-Nov-17	Yes	Improper labeling on monitoring wells. Noncompliance with mortality disposal requirements. Flow meter calibration not done.	Yes

It should be further noted that of the 11 facilities with violations, only 2 of them have been inspected since September 10, 2017, when Hurricane Irma struck. Issues such as flow meter calibration, faulty monitoring wells and problems with lagoon berms all could have presented issues in such storms. Yet, neither enforcement, nor increased oversight have taken place in any of those, or the other cases.

Conclusion and Recommendations

While we are cognizant that Hurricane Irma was a massive storm that affected most of the State of Florida in one way or another, in the final analysis, when the FDEP was faced with a hurricane as strong as Hurricane Irma, the agency chose to bury its head in the sand.

The FDEP may claim that it didn't have enough personnel to timely inspect these facilities, because the storm taxed its resources. This may indeed be the case, but the response to that defense is that it is the administration's own fault for not having adequate resources to do its job. To the extent that the FDEP advocated for additional resources, it failed. On the other hand, if it had the resources, but simply didn't deploy them, the fault lies squarely with agency management.

But other serious issues exist in this program. Hurricane Irma should have been a long overdue wakeup call to the FDEP that facilities such as these CAFOs are quite vulnerable to major storm events such as Hurricane Irma. Yet, the permit conditions written by the FDEP only require the facilities to retain their wastewater on site until such time that a 25-year/24-hour storm event occurs. At that point, the facilities are allowed to fully discharge their wastewater into environmentally sensitive areas, and they are allowed to do this with impunity. Such a system is antithetical to environmental protection.

The consequences to the state from a hurricane such as Hurricane Irma were completely foreseeable. And given the realities of climate change, the likelihood of serious storm events is increasing in Florida. A realistic response that meets these challenges is to write permits that acknowledge the likelihood of such events and to require that the facilities be constructed so that they can withstand them. Telling the facilities that they should be responsible stewards of the environment unless and until they are faced with events that any reasonable Floridian could foresee is myopic.

As in other programs, enforcement remains a constant problem for the FDEP. In the cases of these CAFOs we again see an agency that is wholly resistant to using a regulatory approach when dealing with permittees. The FDEP is so concerned about being seen as a “nice guy” with the regulated community that it is now unable to strictly enforce permits so that the health, safety and welfare of other Floridians and the environment is maintained. This needs to change, as we have been saying for years.

Non-enforcement oversight was also lacking in this situation. Given the approaching threat (which was known about for days ahead of time) there is no indication that the FDEP proactively visited these farms to determine the extent to which major discharges could be

expected. Had this occurred, it may have been possible to utilize other resources, e.g. Florida's National Guard, to assist in taking short-term steps to prevent any likely flooding from reaching surface waters—that is, if the permittees themselves were unwilling to do so.

As it now stands, there is no indication that meaningful change in the permitting or enforcement aspects for these programs is forthcoming, at least with the FDEP, as it is currently constituted. Hopefully such is not the case and we won't be seeing the same results after the next storm strikes.