

CHESAPEAKE BAY: a 'Clean Water' catastrophe - Franklin, Adams, York county farmers brace for more EPA involvement

By JIM HOOK Senior writer
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The Chesapeake Bay remains a Clean Water catastrophe more than 20 years after the states in the watershed began working together to cut pollution.

The U.S. Environmental Protection Agency is stepping in.

Farmers want the agency to take a step back and consider economic realities.

On the other hand, environmentalists say EPA should step up overdue enforcement of the nation's 1972 Clean Water Act.

An EPA draft report calls for "bold action" to return the Bay watershed to health. Actions include curtailing runoff from farms, streets and lawns as well as reducing nutrients from wastewater plants, septic systems and the air.

Nutrients boost the growth of algae in the Bay. The algae chokes out habitat for aquatic life, including the Bay's iconic blue crab. A third of the nation's blue crab harvest comes from the Bay. The number of crabs in the Bay has dropped 70 percent since 1990 to a near-record low.

"If Pennsylvania is successful in cleaning up our share of the Bay's problems, it's going to mean our own streams are cleaner," said Lamont Garber of the Chesapeake Bay Foundation. "Pennsylvania regulators should look at this as a home-grown effort addressing our own needs as well as those downstream. We all want cleaner water."

"I have a creek below the farm," Adams County dairyman John Hess Jr. said. "We live in an agriculture district. That brook is never going to be a mountain brook. If we're going to eat, zero tolerance is not attainable."

EPA has limited authority over farms, but is looking beyond regulation of traditional factory farms, known in the regulations as concentrated animal feeding operations. Livestock is confined to a small area in a CAFO.

The EPA report targets reduction of nutrients in three agricultural priority areas -- south-central Pennsylvania, the Delmarva Peninsula and the Shenandoah Valley in Virginia and West Virginia. Agriculture is the single largest source of Bay nutrients.

Agriculture is growing in south-central Pennsylvania. The livestock population in Adams, Franklin and York counties is increasing at a faster clip than the human population. The number of people in each of the three counties increased about 10 percent between 2000 and 2007, according to Census estimates. The cattle population in York was up 12 percent, broilers in Franklin were up 53 percent and pigs in Adams were up 71 percent, according to the National Agricultural Statistics Service.

The dairy cows by themselves produce twice as much waste annually as all of the humans living in the three counties. The cows excrete nearly 500 million gallons of liquid waste and 155,000 tons of manure. Cows in some areas stand in the streams. Manure is spread on the ground to fertilize crops. Some runs off or seeps into streams. The nutrient-rich water eventually runs into the Susquehanna or Potomac rivers and into the Bay.

Franklin and York counties together have 376 miles of streams impaired by agricultural pollutants, according to the Pennsylvania Department of Environmental Protection. As a single stream, it would stretch beyond Virginia Beach. At least 93 miles of streams in Adams County are impaired by farming.

In the past decade, farmers have been encouraged to plant no-till crops and enticed to fence cattle out of creeks and plant trees on stream banks. DEP has ratcheted up manure regulations on large livestock operations to reduce the runoff of nitrogen and phosphorus.

"Pennsylvania farmers have done more to reduce those nutrient sediments than any other sector," said Garber, agriculture program manager for the Chesapeake Bay Foundation.

Pennsylvania has reduced the amount of nutrients going to the Bay, but it's far short of the goal required by federal courts.

Pennsylvania has reduced pollution from nitrogen, a major nutrient, by nearly 20 million pounds since 1985, according to Garber.

"Pennsylvania needs to reduce that by about another 35 million pounds by 2010," he said. "We're not going to come anywhere near close to that."

Bay Foundation President William C. Baker said he welcomes EPA's focus on action rather than goals. Among the EPA suggestions about agriculture:

- Make smaller livestock farms comply with regulations that CAFOs already follow.
- Address air pollution from CAFOs.
- Enforce compliance.

The proposal comes in tough economic times when dairy farmers are fighting for their livelihoods. Farmers simply aren't paid what it costs to produce the milk.

DEP recently permitted the Hess family farm, JoBo Holstein Farm near Gettysburg, as a CAFO. The 1,000-cow farm supports five families. It offers economies of scale and time off for those working the 24/7 operation.

"We could be five 200-cow dairies," Hess said. "We were trying to make a better living for ourselves. It's something we worked into gradually."

The farm recently paid about \$5,000 for a 3-inch thick nutrient management plan as part of the CAFO rules.

"It changed very little of what I do," Hess said.

A nutrient management plan proposes where and how much manure will be applied to fields on and off the farm.

"It's the rare farmer I've run into who doesn't use his manure responsibly," Hess said. "He's wasting the product he knows has value. You use it as a fertilizer."

A recent study by Citizens for Pennsylvania's Future, however, claims that the state nutrient management program does not adequately protect a watershed at the border of Lancaster and Chester counties. PennFuture revisited the Octoraro watershed after five years and found that local livestock operators were producing more nutrients. About 15 percent of them were not in compliance with their permits, and compliance or non-compliance could not be determined in more than 25 percent of operators.

"This report shows that the state and federal governmental agencies are simply failing to police these facilities and their disposal of manure," said Kimberly Snell-Zarccone, PennFuture's attorney for agricultural issues.

The findings could have significance throughout the region, according to the study.

The call for increased enforcement comes at a time when state legislators are considering a budget that would cut DEP's budget by 25 percent, according to Myron Arnowitt, director of Pennsylvania Clean Water Action.

Pennsylvania has not spent enough on enforcement staff, technical advice for farmers and financial assistance to farmers, according to Garber.

"This is why we see a need for the EPA to step in and take a leadership role to get the job done," he said.

"When people get hit in the pocketbook, that's when decisions get more difficult. We didn't see an increase for conservation district funding during times of budget surpluses. It's not an answer that we can't do this because we're in a budget crisis. We've had 20 years of underfunding."

"If cleaning up the bay to 100 percent is important, the buck has to be passed to someone," said Franklin County dairyman Rod Hissong. "Is the taxpayer willing to pay for more oversight?"

Hissong, president of Pennsylvania Professional Dairy Managers, said the nation is coming to a point of decision: Should food be produced domestically, or should Americans rely on overseas producers?

Modern grazing techniques may not be the answer to dairy CAFOs. If organic milk were to increase its market share from 2 percent to 10 percent, the additional pasture would cover Ohio, Hissong said.

Farmers are looking at big dollars, especially if CAFO regulations apply to smaller operations. CAFOs are required to store manure so it can be applied when the ground is not frozen. Manure lagoons are expensive.

"If you've got someone milking 75 to 100 cows having to spend \$200,000 to \$300,000 in today's economy, we can't do it, even at 50 percent cost share," Hess said.

"Technology is not cheap," said Hissong, co-owner of the family's 1,600-cow dairy near Mercersburg. What might cost his Mercer Vu Farm a couple a bucks a cow could cost a 200-cow producer \$20 to \$30 a cow, he said. Hissong's latest improvement under consideration: a cover for the lagoon so carbon-rich methane can be burned off.

CAFO rules currently don't kick in unless a farm has more than 700 cows, 1,000 beef cattle, 2,500 swine or 30,000 chickens.

Currently, Adams County has 14 CAFOs, Franklin 27 and York 15. The number of CAFOs in Franklin County has doubled in less than six years.

A review of DEP's online permitting database of facts revealed that about one in every four CAFOs in the three counties has been cited for a permit violation, most frequently for improperly storing or spreading manure or discharging it to a stream.

CAFOs are the tip of the agricultural iceberg. The three counties have more than 5,000 farms, and just 56 are CAFOs.

"Somehow we haven't done the right thing," Hess said. "A lot of people have been saying that for the past 10 years: You're going after 5 percent of farmers trying to clean up the problem. I don't know how a small farm can afford to jump through the hoops."

EPA cannot rely on states to establish nutrient levels in streams, the EPA Office of Inspector General stated in August. EPA should identify waters of national value and decide whether EPA should set standards or hold states accountable for setting them. Setting regulations and increased costs to taxpayers and businesses can be unpopular.

EPA is looking at a larger problem, the Gulf of Mexico watershed, which includes the nation's farm belt. The Midwest farm states have not adopted water quality standards for nutrients, more than 10 years after EPA recommended they do so.

The Gulf's problems are on a grander scale than the Bay's. It gets silt from the nation's largest river system and has larger "dead zones" where nothing grows for lack of oxygen.

"I think that's why EPA and conservation groups and water groups are so focused on the Chesapeake Bay," Garber said. "If we don't get it right here, it raises real questions about how our waters across the country are going to be restored and protected. The stakes are very high."

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Protecting the bay

1972 - Clean Water Act is enacted to maintain the quality of the nation's waters.

1983 - States surrounding the Chesapeake Bay and the EPA sign the first Bay Agreement calling for voluntary improvement of the bay.

1985 - Pennsylvania joins the interstate Chesapeake Bay Commission, created to coordinate state legislation to protect the bay.

1987 - The second Bay Agreement sets goals for reducing nutrient loading to the Bay by 40 percent by 2000. Congress authorizes \$52 million to assist.

1998 - The states see that the goal will not be reached.

2000 - A third Bay agreement is signed. The new goal: Remove the bay from the nation's list of impaired waters by 2010.

2006 - EPA acknowledges the goal will not be met.

2009 - EPA prepares to assert its authority in cleaning up the bay.

Pollution vs. the bay's blue crabs

All streams in Adams, Franklin and York counties wind their way to the Chesapeake Bay.

They are part of the bay's 64,000 square mile watershed spanning parts of six states. About 17 million people live in the watershed.

More than 500 million pounds of seafood is harvested from the bay every year. About one-third of the nation's blue crab harvest is taken from the bay.

Dead zones, or areas of low oxygen, rob crabs of clams and worms. It costs watermen about half the commercial crab harvest. About 4,500 crabbing jobs have been lost in the bay during the past decade.

Pollution from nutrients, nitrogen and phosphorus, is the most serious problem facing the bay. Sediment and the algal blooms fed by the nutrients are blamed for the dead zones and the loss of habitat for young crabs. More than half the bay's eelgrass has died since the 1970s.

The 2008 State of the Bay Report rates the bay's health at 28 of 100 (a "pristine" bay circa. 1600 before European settlement). At its worst in the early 1980s, the bay would have scored a 23. A "saved bay" would score a 70.

Source: Chesapeake Bay Foundation

Livestock counties

Adams, Franklin and York counties all rank among the Top 10 livestock counties in Pennsylvania.

Annual sales of livestock and milk total:

- \$270 million, or 89 percent of all farm revenues in Franklin County (2nd).
- \$147 million, or 68 percent of all farm revenues in Adams County (5th).
- \$112 million, or 53 percent of farm revenues in York County (7th).

Adams and York counties are No. 1 and 2 in Pennsylvania turkey production. All three counties rank nationally for turkey production (Adams 41st, York 54th and Franklin 74th.) On any given day, the farms have more than 1.7 million gobblers on hand.

Only Lancaster County produces more milk than Franklin County among the state's 67 counties.

Franklin's dairy production ranks 34th in the nation.

Accelerating bay cleanup

The movement to accelerate the cleanup of the Chesapeake Bay.

This fall, the Environmental Protection Agency is to set reduction targets for the nutrients nitrogen and phosphorus in the major river basins of the Chesapeake Bay watershed.

In December 2010 the EPA will set a total maximum daily load of nutrients that can flow into the Bay. The Chesapeake Bay Executive Council, currently governing the state's cleanup of the Bay, has set cleanup targets for 2025.

U.S. Senator Benjamin L. Cardin, D-Md., wants to move the deadline ahead to May 2020. He chairs the Environment and Public Works Water and Wildlife Subcommittee that presides over the EPA's Chesapeake Bay Program. His Chesapeake Bay Ecosystem Restoration Act of 2009 would give state and local governments enforcement tools and annually appropriate \$1.5 billion in grants to control urban/suburban storm water and another \$90 million for other Bay clean-up programs.

Meanwhile, the Chesapeake Bay Foundation has put on hold its lawsuit filed in January. The foundation sued EPA to enforce the Clean Water Act