

The Washington Post

EPA tries to get Chesapeake Bay cleanup back on track

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Sunday, November 7, 2010; 10:29 PM

The Chesapeake Bay does not like your lawn.

That green grass is probably coated with pesticides and fertilizers and studded with pet poop. All that washes off in the rain and causes environmental problems downstream in the Chesapeake.

Now, the humble suburban lawn is a test case for the Obama administration, which is trying to overhaul the long-failed effort to clean up the bay.

Its vision calls for unprecedented - and perhaps uncomfortable - changes on land. Farmers will cut back on fertilizer. Taxpayers will shell out to improve sewer plants and filter storm runoff.

And your lawn might need to be replaced by rain gardens or shaggy fields of native plants.

What's missing is a detailed plan - and an assurance that residents will choose a distant estuary over the beloved patch of green outside their door.

"The well-manicured, beautiful, dark-green, over-fertilized lawn can be part of the problem," said Randy Bartlett, a public works official in Fairfax County. He said that in addition to paying more fees, residents might see new rules or incentive programs designed to make them view their lawn differently. "It's kind of like with the seat belts. It took us a while to get used to it."

The Chesapeake's main problems are a pair of pollutants, nitrogen and phosphorus, that wash downstream in manure, treated sewage and fertilizer. In the bay, these feed unnatural algae blooms that rob the water of dissolved oxygen, creating underwater "dead zones."

These problems have not been resolved, despite a 27-year cleanup effort that has cost billions of dollars, but the EPA says it is determined to put the cleanup on course.

This fall, it scolded several states for not doing enough to curtail the pollution they send downstream. For those states, including Virginia and Pennsylvania, the Environmental Protection Agency threatened unprecedented punishments: It would force costly sewer-plant upgrades or limit new development in some areas.

Oliver Houck, a professor at Tulane University in New Orleans, said that the EPA has made the Chesapeake a national laboratory. He said that other bodies of water, including the Gulf of Mexico, have similar dead zones but that the problem hasn't been tackled with the same ambition.

"You win this thing, you're winning it for the country," Houck said.

As minuscule as lawns seem, they add up. This year, the Chesapeake Stormwater Network, an advocacy group, found that turf grass was the largest "crop" in the Chesapeake watershed, more widespread than any crop grown on farms.

So part of the new save-the-bay effort, officials and environmentalists say, should be a re-imagining of the lawn.

Rainwater that falls onto lawns often washes off laden with nitrogen and phosphorus. It runs into storm sewers, mixing with runoff from parking lots and roads.

"Everything that is laying on . . . grass or sidewalk or parking lot, whether that be dirt or fertilizer or trash," comes downstream, said Brent Bolin of the Anacostia Watershed Society.

This is an urban area's wash water, and it accounts for 8 percent of the nitrogen and 15 percent of the phosphorus entering the Chesapeake. Those totals have continued to grow, despite the cleanup's efforts, because development has increased parking lots, roads and lawns.

The EPA's plans to clean up this runoff include re-imagining what a storm sewer is. Instead of using pipes, the agency envisions that states and counties will have to install grassy ditches and restore natural streams in place of concrete channels. The idea is to slow down runoff and let it seep into dirt and roots.

For homeowners, the main effect of these efforts will be increased fees. It's not clear how much fees will increase: The EPA says cost increases will be "marginal." But in Fairfax, Bartlett estimated building them might bring fees up to \$250 to \$600 a household per year, up from \$70 now.

Environmentalists also say lawns should change. A more bay-friendly choice, they say, would be to remove grass and replace it with native plants that need no fertilizer and less watering.

Or, they say, homeowners could replace some of their grass with a "rain garden," which catches the water in a depression and lets it soak into the roots of trees and shrubs.

"I mean, look at how beautiful it is," said Jane Good, who paid about \$7,000 to install a rain garden behind her Bethesda home. Montgomery County provided guidance and a rebate that paid less than half of the cost. "You look at this, and you don't think that it has a special purpose."

'A giant, huge hole'

Not everybody is as pleased, though, to have a rain garden behind their house.

In Gainesville, the Hopewell's Landing subdivision was built with rain gardens throughout one section. Resident Kenneth Padgett said the one near his house is a pit as deep as six feet, with very steep sides.

"I thought it was a great thing until they started putting them in," Padgett said. The idea was introduced, he said, in "a pamphlet with a beautiful picture. When it was implemented, it was a giant huge hole in the ground."

Among those worried about the EPA's new crackdown is the National Association of Home Builders. Association officials fear that the new rules could discourage redevelopment of older sites because costly new rules would require installing rain-catching features as part of the renovations.

"Those requirements are going to be very, very aggressive, very, very costly, and a stretch for anybody to try to meet," said Glynn Rountree of the association. As costs and restrictions mount, he predicted, residents are "going to reassess how much the Chesapeake Bay is worth to them."

EPA officials say that the change will not be that drastic and that homeowners who don't make large-scale renovations probably won't have to change anything about their lawns.

"We cannot envision anybody telling homeowners to tear up their lawns or replant our lawns with something," said J. Charles Fox, the EPA's bay cleanup czar.

Possible rule changes

Residents could still see a series of smaller rule changes affecting lawns and lawn care. In some places, they already are.

In Annapolis, authorities have outlawed most use of fertilizer containing phosphorus on lawns. Virginia and Maryland officials said they could imagine other jurisdictions adopting similar rules.

Joe Lerch of the Virginia Municipal League, which represents the state's local governments, said he wondered how laws such as that might be enforced.

"We're laying off teachers, you know, policemen, firemen," Lerch said. "And now you want to hire fertilizer cops?"

In Montgomery County, drainage rules enacted in 2007 apply when there are significant additions on small lots. Homeowners might need to install things that trap or filter rainwater before it flows off their property.

In Bethesda recently, home builder Brad Beeson pulled up outside a property his company, Bethesda Bungalows, had recently built. He said county regulations required the business to install 10 large "recharge chambers" underground. These are porous boxes that look like large milk crates. Water from the gutters flows underground and into these boxes, where it leaks slowly into the soil.

"He had to spend \$50,000 to do this," Beeson said, referring to the homeowner. "And now he can't do his pool, and he can't do any kind of landscaping." Instead, he said, the homeowner had to opt for the cheapest kind of lawn: short, green grass.

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