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Pa. official defends rules on gas drilling waste

Associated Press

Pennsylvania's top environmental enforcement official said Tuesday that he is confident that wastewater discharged into rivers and streams by the booming natural gas industry hasn't degraded the state's drinking water.

At least 3.6 million barrels of the ultra-salty, chemically tainted wastewater produced by gas drilling operations were discharged into state waterways in the 12-month period that ended June 30, according to records reviewed by The Associated Press. Drinking water for hundreds of thousands of Pennsylvanians is drawn from those rivers and streams.

Those discharges have troubled some environmentalists. Most of the big drilling companies digging thousands of new wells in Pennsylvania have committed to curtailing or ending the practice.

John Hanger, the outgoing secretary of Pennsylvania's Department of Environmental Protection, said he believes the new regulations are adequate to protect water supplies.

"The drinking water at the tap in Pennsylvania is safe. It has not been contaminated by drilling," he said.

The state set new standards in August governing discharges by any new drilling waste treatment plants, but allowed existing operations to continue putting partially treated wastewater into rivers and streams, as long as the water body's quality does not fall below federal drinking water standards.

Hanger said state officials have been using a network of sensors operated by his department and water supply companies to monitor for signs that rivers may have sustained a significant drop in water quality.

So far, he said, they haven't found any.

Many researchers have been particularly concerned with how the high levels of salt and dissolved solids in drilling waste might affect rivers, especially those that have already picked up unhealthy amounts of pollution from other sources, including abandoned coal mines.

If a river's total load of dissolved solids gets high enough, it can make the water taste bad, leave a film on dishes, corrode equipment and could give people diarrhea. Researchers, some of them working under the auspices of the federal Environmental Protection Agency, are still trying to determine if Pennsylvania's river discharges, at their current levels, are dangerous to humans or wildlife.

Hanger said no river used for drinking water has exceeded the EPA standard for dissolved solids for an extended period, although there have been some instances of seasonal spikes that can last for a few days.

"We are watching it very closely," he said.

Pennsylvania is rare among gas-producing states in that it allows the wastewater that flows out of natural gas wells to be disposed of in rivers.

In most states, drillers are required to send the liquid back down deep shafts so it can't pollute surface water.

Drilling companies use about 2 million gallons of water a day in Pennsylvania to help get at the gas locked in its vast underground Marcellus Shale gas field. During a process called hydraulic fracturing, the water — mixed with sand and chemicals, some of them toxic — is forced into the wells at high pressure, shattering the shale and releasing trapped gas.

There has been a fierce debate over whether the wastewater that returns to the surface is hazardous.

It can contain high levels of some toxins, like barium, strontium and radium, but the treatment plants handling the bulk of Pennsylvania's gas drilling waste remove most of those substances before discharging the water.

State officials and industry participants say the amount of waste put back into waterways, while significant, is also safely diluted by the massive volumes of water in the rivers, reducing both any residual toxins and the salt to safe levels.

An AP review of state records found that the state couldn't account for the disposal method for 1.28 million barrels of drilling wastewater, about a fifth of its total, because of incomplete record keeping.

Hanger said the state is working to improve its methods for tracking wastewater, including making recent hires of additional staff.

"There's always room for improvement," he said.

It also found that in 2009 and part of 2010, about 44,000 barrels of drilling waste produced by the energy company Cabot Oil & Gas were improperly sent to a treatment facility in Hatfield Township, a Philadelphia suburb, despite regulations intended to keep the liquids out of the watershed. The liquids were then discharged through the town sewage plant into the Neshaminy Creek, which flows through Bucks and Montgomery counties on its way to the Delaware River. Customers in 17 municipalities get treated drinking water from that creek.

Water quality test results reviewed by the AP also showed that some public water utilities downstream from gas wastewater treatment plants have struggled to stay under the federal maximum for contaminants known as trihalomethanes, which can cause cancer if people drink tainted water for many years.

Trihalomethanes can be created during the water treatment process by dissolved solids in drilling waste, but other types of pollution are just as often to blame for the problem.

Hanger said those trihalomethane readings are "of concern," but he couldn't say definitively whether there was any link to gas drilling waste.

Faced with opposition to river dumping and tightening state regulations, all of the state's biggest drillers say they are now recycling a majority of the wastewater produced by their wells in new fracturing jobs, rather than sending it to treatment plants.

Hanger said about 70 percent of the wastewater is now being recycled, which he credits to the tighter state regulations.

Still, with dozens more energy companies drawn to the Marcellus reserves — more than 2,400 wells have been drilled and work has started on 5,400 more — operators of the largest of the state's 16 most commonly used treatment plants say they haven't lost much business. In midwinter, records will be available to verify company claims of any major drop-off in river disposal.

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