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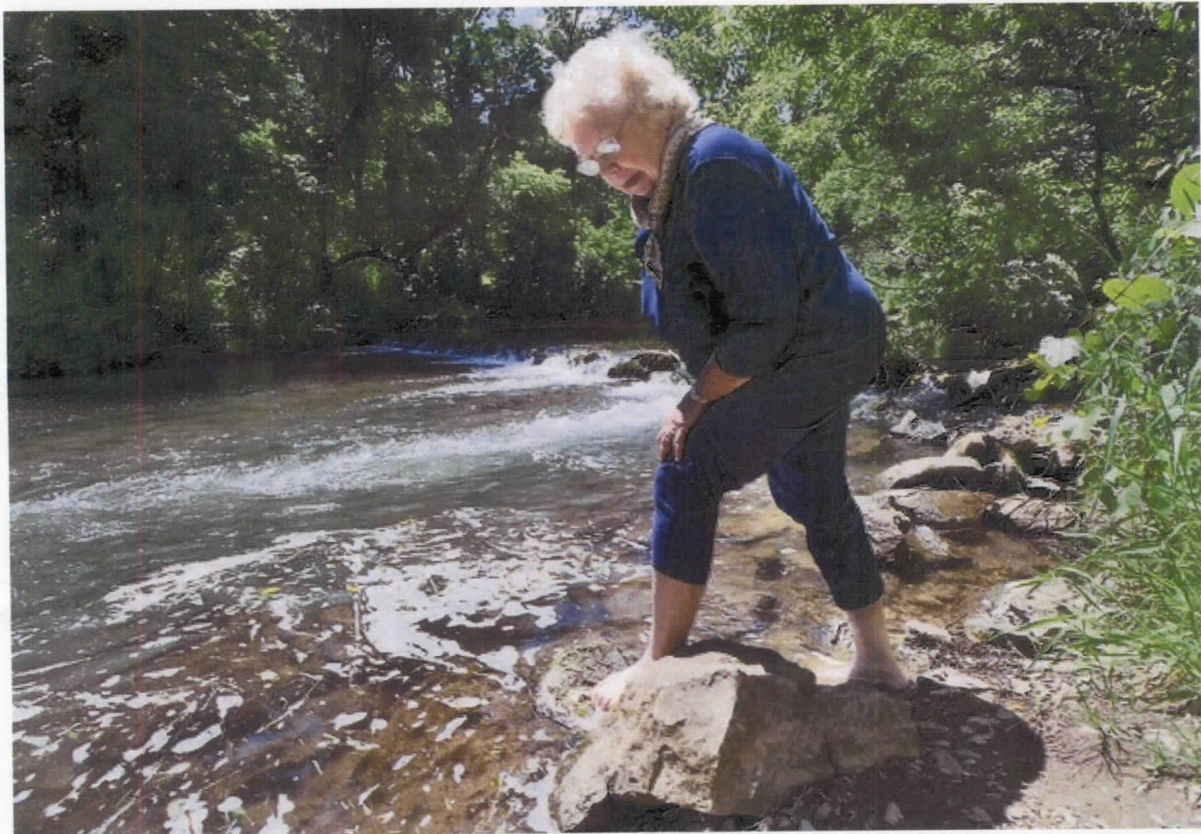
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DIRTY LITTLE SECRET

Sewage dumps by Allentown, others, in treasured Little Lehigh Creek must end, feds say.

By Christopher Baxter, Patrick Lester and Jarrett Renshaw, OF THE MORNING CALL

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Jan Keim, of Salisbury, views a section of the Little Lehigh Creek near Keck's Bridge in Allentown. Keim has been a long time advocate for the creek. (HARRY FISHER, THE MORNING CALL / July 24, 2010)

In the ebb and flow of the treasured Little Lehigh Creek, Janet Keim sees flashes of history: the Delaware Indians who once drank from its shores, her own children who played by its banks and the weekend anglers who still waded in its channel to hook a brown trout.

"It's the life of the Valley," she says, standing along the creek at Keck's Bridge in Salisbury Township, where the water bends north before meeting the Lehigh River in Allentown. But sniff

the air and know this, she adds: The life and development the creek helped spawn now threaten its very existence.

The faint smell of sewage wafts from manholes tucked into the uncut grass along the creek this day in June. When the sky unleashes the occasional torrent, rain leaks into the area's aging and rusted sewer system, overwhelming the main lines that snake to the Kline's Island treatment plant in Allentown.

As the pipes fill past capacity, a dirty cocktail of sewage and rain bursts manholes and rushes toward the treatment plant, which sits off Union Street and along the creek. Because the charge of water could overwhelm and even destroy the plant, the city channels the untreated waste into the Little Lehigh.

More than 33 million gallons of raw sewage entered the creek from 1999 to 2008 as a result, a Morning Call review of state and federal records shows. The pollution equates to someone flushing a toilet directly into the Little Lehigh about once every 14 seconds for nine years.

Creek caretakers such as Keim, a member of the Little Lehigh Watershed Coalition, have watched the sewage overflows in horror, fearing the worst for the waterway that meanders 25 miles from Berks County, through the Lehigh Valley, and into the Lehigh River.

"The Gulf has its oil slick, we have our sewage slick," Keim says.

The problem — and blame — extends beyond the city. It starts in western Lehigh County and cuts through nearly a dozen suburban communities, where rapid development combined with deteriorating pipes and rainstorms help overwhelm the main sewer line operated by Lehigh County Authority.

The LCA's lines end in Allentown, which reported raw sewage overflows to the state Department of Environmental Protection and had never been fined or reprimanded until 2007, when the state broke its silence and joined with the U.S. Environmental Protection Agency to crack down.

State and federal officials now say the sewage pollution poses a risk to public health and the environment. The illegal overflows violate the federal Clean Water Act, passed in part to force upgrades to municipal sewer systems, and must end by 2014, according to EPA orders issued in 2007 and 2009.

Carrying out that mandate will probably cost Allentown and affected suburban communities millions of dollars and take years to complete. The EPA orders — by no means unique to Allentown — are part of a national effort by the agency to curb raw sewage overflows.

Data show Allentown's discharges, which account for the majority of the raw sewage sent to the creek, have become increasingly common during the past 10 years, a problem forecasted more than two decades ago but downplayed by the state's former regional water quality manager.

The Morning Call review also found that Allentown and LCA put off solutions to the raw

sewage overflows because of the cost of upgrades and their consistent positions that the spilled sewage, often diluted by rainwater, posed no threat to the creek or the rest of the watershed.

Allentown Mayor Ed Pawlowski disputed EPA's characterization of the overflows as being raw sewage, saying, "In many ways, it's processed." He later clarified his statement by saying the overflows are diluted by rainwater and are not purely waste.

Allentown Public Works Director Richard Young said he does not think the sewage has had an impact on the Little Lehigh. LCA spokeswoman Liesel Adam said the overflows individually "have very little environmental impact, but over time it's not something you want to see happening."

According to EPA, sewage overflows across the United States pose one of the greatest threats to oceans, streams, rivers and lakes, which provide food and drinking water, and support recreation and local economies.

"The idea that discharges of untreated sewage don't have an environmental impact — I have a hard time accepting that kind of position," said Martin Harrell, acting chief of the EPA's regional department overseeing water pollution enforcement.

Raw sewage can carry bacteria and viruses that can cause illnesses from mild stomach cramps to life-threatening diseases, such as cholera and dysentery, the EPA website states. The creek supplies about one-third of Allentown's drinking water, which is treated to kill any bacteria before going to customers.

The city also supplies water to Salisbury, South Whitehall and Hanover townships in Lehigh County.

The drinking water intake is upstream from where raw sewage has overflowed from the treatment plant, Young said. But the city does turn off the intake during major rainstorms because of the amount of dirt, silt and other material washed into the creek.

As the quality of the creek water decreases, drinking water treatment costs increase, Young said.

Few data exist on the direct impact of the sewage on the quality of the creek. A March 2010 state report concluded the Little Lehigh exceeded fecal-coliform and total coliform bacteria benchmarks for drinking before treatment or swimming, an indication of sewage contamination but not a direct link.

That information is from 2002, and the state does not have more recent statistics, said Mark Carmon, regional spokesman for DEP. Even if the bacteria levels are the same or worse, they would not necessarily harm the overall biology of the stream, considered an excellent fishery by state standards.

The coliform bacteria is present in the water, but in unknown quantities, said Richard Niesenbaum, a Muhlenberg College biology professor who tested the creek this summer with

Clean Water Action, an environmental advocacy group.

"We're seeing strong evidence of fecal coliform contamination in an area where I often see children swimming," said Niesenbaum, who tested three areas, including near Keck's Bridge. He said he would not drink the water before treatment, as the Indians once did, or swim.

Aside from coliform bacteria, the creek faces other threats. In 1998 and 2008, the state listed the Little Lehigh as "impaired" because of the impact of agricultural runoff, such as animal waste and pesticides, as well as stormwater runoff from paved and developed communities.

In 2007, a habitat assessment conducted by the Wildlands Conservancy revealed that 56 percent of the 24-mile creek corridor is in "poor" condition. Conversely, just 12 percent of the creek was rated in "good" condition, and no creek sections earned the mark of "excellent."

Predicted, not prevented

The Lehigh County Authority operates the main sewer lines that collect waste from 10 connected municipal systems and carry it to Allentown's Kline's Island plant, where it is treated and discharged. A few other municipal systems convey sewage directly to Allentown.

The LCA lines serve more than 18,000 households.

Overflows along the LCA's line near the creek, specifically at Keck's Bridge, became so bad in the mid-1980s that the state Fish Commission threatened to issue fines and take legal action. The commission also refused to stock portions of the waterway with trout.

As public outcry mounted, the state Department of Environmental Resources (now the DEP) intervened and issued a moratorium on new sewer hookups until LCA presented a plan on how to eliminate the overflows. The department said the pollution was bad and getting worse.

"There's no question in the world that it's not a good thing for a public water supply," former LCA General Manager Raymond Snyder said in 1984.

LCA proceeded with an \$11.2 million plan to upgrade the system and eliminate overflows. But the overflows never stopped. In fact, LCA's patches along the pipe only resulted in more flows reaching Allentown, which during future deluges turned more raw sewage to the creek.

Dan Koplisch, former superintendent of the city's sewage treatment plant, said in 1984 that Allentown should study how LCA's improvements might cause more overflows. But Joseph Feola, then regional water quality manager for the DER, said the same year he did not foresee any problems.

During the next 20 years, the state took no major actions to address increasingly common sewage overflows allowed at Allentown's Kline's Island plant. In the 1980s, overflows occurred once a year and amounted to "1 or 2 million gallons a day" during major storms, Koplisch said at the time.

Between 1999 and 2008, overflows happened an average 1.5 times a year, lasted an average of nine hours and sent, on average, more than 2 million gallons of raw sewage to the creek. For example, Allentown sent more than 6 million gallons of sewage to the creek in 2005, when remnants of Tropical Storm Tammy soaked the Valley.

The Kline's Island plant handles about 32 million gallons of sewage each day; it can handle up to 40 million gallons per day. During a major storm, the plant can handle as much as 86 million gallons until it must divert untreated waste into the creek to prevent damage.

"The increasing number of occurrences [of overflows] is primarily what prompted the department's concerns," the DEP wrote in a written response to Morning Call questions about why the agency did not act sooner. DEP's renewed attention coincided with the expiration of Allentown's water discharge permit.

DEP changed its tenor with Allentown in 2006, when it labeled the city's discharges at Kline's Island "sanitary sewer overflows," which are illegal under any circumstance. Prior to that, the agency considered the overflows to be legal emergency bypasses, often permitted to protect plants.

The reversal means the city currently has no legal way to discharge sewage in excess of what the treatment plant can handle.

According to DEP, Allentown indicated that it would not pursue a solution "unless a court first affirmed the department's position." The exchange was shared with EPA, which in 2007 chose to take the issue a step further and execute an order against the city to stop the raw sewage discharges.

The federal agency issued a second order in 2009, acknowledging the city's claim that problems up the pipe under the control of LCA and the connected communities contribute to the raw sewage overflows at Kline's Island and should also be addressed.

Allentown disputes both DEP's and EPA's characterization of the discharges as illegal overflows. Young, the public works director, said the city would be not be doing anything to correct the problem had EPA not intervened.

Money and politics

In 2008, Deana Zosky, co-chairwoman of Renew Lehigh Valley and a former Lower Merion commissioner, sounded alarms about the Little Lehigh's degradation in a letter to DEP. She described the sewage impact on the creek, and warned that LCA and Allentown may have trouble working together.

In a separate e-mail to DEP, sent in 2008, she wrote that she was "very skeptical" that LCA wanted to work with Allentown and other communities toward a long-term solution. Her e-mail came after LCA wanted to pursue a pump station, which helps push sewage to the plant, without

consulting Allentown.

Zosky's notes illustrate the perception that a political battle is brewing over the sewage solution, although Adam, the authority spokeswoman, said "there's a long history...between LCA and Allentown working in cooperation on a wide variety of projects."

At stake: the control of the sewer system, including who gets the revenue for transporting and treating new sewage created as a result of future development. Control of Kline's Island has been a cash cow for Allentown, which has made nearly \$10 million from selling excess capacity since 2005.

The current agreement among Allentown, LCA and the connected communities guarantees Allentown will get at least the amount of sewage flowing to the plant now. But if LCA pursues upgrading its pre-treatment plant in Upper Macungie to a full treatment plant, Allentown may be shut out of new revenue.

Higher sewer bills also hang in the balance. In Macungie, customers saw their bills double and triple in some cases to help pay for repairs. Alburdis, with an annual budget of about \$1.2 million, anticipates three years of repairs to cost \$500,000.

Alburdis Council President Steven Hill hopes the borough can get \$250,000 in grant money to help offset that cost, leaving residents to foot the other \$250,000, or more than \$80,000 a year.

"With a small borough like Alburdis, an \$85,000 increase is substantial," Hill said.

A pair of projects by LCA — one to create a storage basin to hold 3 million gallons of sewage during heavy storms, and another to repair the main sewer line along the creek — will cost about \$16 million. The basin is expected to be complete by November, while the repair work will take much longer.

The price tag for those projects pales in comparison to what is to come.

With sewage treatment capacity at Kline's Island expected to be exhausted in three to five years, Allentown and LCA are considering ways to handle more sewage, prompting talk of projects that could cost \$160 million to \$221 million, according to estimates provided by LCA.

Allentown plans to build its own storage tank to hold overflows during major storms, preventing the raw sewage discharges to the creek and satisfying EPA. The city is also considering various upgrades to Kline's Island to increase capacity as alternatives to LCA's plans, but did not provide cost estimates

The Little Lehigh for decades has suffered from the region's failure to adequately deal with its waste. Now, its future depends on a sound sewage solution, which will require cooperation among Allentown, LCA and dozens of community leaders. Until then, the cherished creek remains at risk.

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Sewage dump

During the past decade, the City of Allentown has dumped more than 33 million gallons of untreated sewage into the Little Lehigh Creek

2008: 780,000 gallons

2006: 3,200,675

2005: 8,984,480

2004: 5,424,479

2003: 3,301,604

2000: 1,310,000

1999: 10,550,000

Total: 33,551,238

Source: State Department of Environmental Protection; City of Allentown; U.S. Environmental Protection Agency

Upgrade options

The Lehigh County Authority and the City of Allentown have proposed sewer upgrades to increase treatment capacity for future development and eliminate raw sewage from spilling or being discharged into the Little Lehigh Creek. But the two sides have yet to agree on the most cost-effective option.

LCA Option 1

Expand Allentown's Kline's Island Treatment Plant to increase capacity and stop untreated

dumping in the Little Lehigh.

Cost: \$221 million.

LCA Option 2

Upgrade LCA's pre-treatment plant in Fogelsville to a full treatment plant, discharge treated sewage to the Jordan Creek, upgrade Kline's Island to eliminate untreated dumping.

Cost: \$160 million

LCA Option 3

Upgrade LCA's pre-treatment plant in Fogelsville to a full treatment plant, discharge treated sewage to the Lehigh River, upgrade Kline's Island to eliminate untreated dumping.

Cost: \$169 million

LCA Option 4

Upgrade LCA's pre-treatment plant in Fogelsville to a full treatment plant, spread treated sewage on the land, upgrade Kline's Island to eliminate untreated dumping. Cost: \$164 million

Allentown Option

Build holding tank to eliminate untreated dumping, implement various improvements to Kline's Island plant to increase capacity. Cost: Undetermined .

Source: Lehigh County Authority; City of Allentown

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