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Maine rivers face potential catastrophe as sludge builds up

by **Sawyer Loftus, Kathleen O'Brien** and **Erin Rhoda**

March 2, 2023



Biosolids are moved along a conveyor and sent down a shoot into a container below. Credit: Linda Coan O'Kresik / BDN

Hundreds of tons of wastewater sludge containing bacteria, chemicals and human excrement is building up each day at facilities across Maine that have no good way to dispose of it, after the company running the state-owned landfill abruptly said it couldn't accept any more of the material.

Casella Waste Systems told more than 30 wastewater treatment plants last week that it would no longer put their sludge, which contains the more solid components of wastewater, into Juniper Ridge Landfill in Old Town, shocking some of their operators who are scrambling to find a solution.

Juniper Ridge previously accepted 6,000 tons of sludge monthly. It now has to divert 4,400 tons each month, meaning it can accept only one-third of the sludge it did before. If wastewater treatment facilities can't find anywhere else to store or send the sludge, the worst-case scenario is that it will end up in Maine's rivers.

“This is a statewide issue. If this goes unsolved, this will become a human health and environmental crisis,” said Amanda Smith, the water quality management director for the Bangor Wastewater Treatment Plant.

Some sludge is now being trucked to New Brunswick, Canada, for disposal. But not all of it will go there, leaving some wastewater treatment plants to worry about a catastrophic situation in which the sludge will end up in Maine rivers. Dealing with the sludge is anticipated to contribute to significant increased costs for local residents.

Casella, which runs Juniper Ridge, said it was rejecting the sludge because it couldn't get enough bulky waste to mix with the sludge to maintain a stable landfill. It cited the Maine Legislature's passage of [LD 1639](#), which prevented the landfill from using debris that came from other states through its Lewiston facility, as the reason why it does not have enough oversized bulky waste.

But others questioned why the company didn't find alternative ways to bulk up the sludge, given that it has been nearly a year since the passage of the law.



Amanda Smith and Phil Besse stand next to a 30-yard container as it fills with biosolids at the City of Bangor Wastewater Treatment Plant on Main Street. According to Smith, three 30-yard containers of biosolids are produced every day at the plant. Two of those three containers are now being shipped to Canada. Credit: Linda Coan O'Kresik / BDN

Instead of landfilling its sludge, the Kennebec Sanitary Treatment District in Waterville now must store most of it in tanks, said Nick Champagne, the wastewater treatment plant's superintendent. Space is limited. Perhaps there is enough room for a week or two, but the facility doesn't have precise predictions because it has never been in this situation before, Champagne said.

In addition to not having unlimited space, the problem is that the tanks are used when there is a spike in wastewater, such as if there's a large snowmelt or a rainstorm. If a springtime thaw fills the tanks, the sludge, sometimes called biosolids, could flush out of its system and flow into the Kennebec River without being properly treated, Champagne said. Downstream, that river water contributes to communities' drinking water wells.

“It’s a dire situation. Disposal of biosolids is a matter of public health and safety. It’s a public health concern, a public health crisis,” Champagne said. “It’s a matter of time — not if, when — we’ll be violating our [National Pollutant Discharge Elimination System] permit.”

The plant’s permit, approved by the state, limits how many gallons of wastewater, and how much mercury, bacteria, solids and other contaminants, can be discharged into the river. Violating the permit’s limits could result in fines or a consent agreement, Champagne said, but the biggest risk is to people’s health and the environment. The facility processes waste from Benton, Fairfield, Winslow, Waterville and paper plate-maker Huhtamaki.

If the facility knows a storm is coming, it can try to disinfect the sludge, but “these are desperate measures to try to protect the health of the general public and the Kennebec River,” he said.

WASTE DISPOSAL WOES

Municipalities face ‘crisis’ as landfill reduces sludge deliveries

 by [Kevin Miller, Maine Public](#)



The facility’s sludge cannot go to Canada for disposal, Champagne learned, because its levels of per- and polyfluoroalkyl substances are too high. PFAS are a class of chemicals that build up in bodies and the environment over time, and have been linked to health problems.

For decades the sludge was spread on farm fields as fertilizer, until the Maine Legislature put a stop to the practice because PFAS from the sludge seeped into people’s wells. Since the restrictions on spreading sludge went into effect, many wastewater treatment plants have been sending the waste to landfills instead.

But Juniper Ridge has gotten too much of the structurally unstable sludge and not enough other waste to ensure the integrity of the landfill, said Jeff Weld, a spokesperson for Casella. LD 1639, which was signed into law in April 2022 and did not go into effect until February, closed a perceived loophole in state law that had allowed Juniper Ridge to use waste that came from other states through ReSource, its construction and demolition debris recycling facility in Lewiston.



A compactor drives over trash at the Juniper Ridge Landfill in Old Town, Jan. 19, 2022. Credit: Linda Coan O'Kresik / BDN

"We're not about political stunts. We're about providing service to our customers. This is reality. This is exactly what we're dealing with now, and we're working hard to find solutions," Weld said. "For anyone to insinuate that this is a political stunt doesn't necessarily live in the same reality that we do on a day-to-day basis."

Casella wants the state to delay enforcement of the new law to allow the company to bring in more bulk trash, or modify the law to give the company more time to find an alternative, Weld said.

But proponents of the legislation, such as Sarah Nichols, a sustainability and waste issues expert for the Natural Resources Council of Maine, and a lobbyist, said other landfills across the country use many types of bulking agents to stabilize sludge, such as traditional household waste or contaminated soils — which are already available to Juniper Ridge.

“It seems to me that they’re going with the nuclear option right now: an abrupt, ‘We’re not going to take it,’” Nichols said.

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Though she has asked multiple times, Nichols said she has never seen data from Casella supporting the company’s assertion that it doesn’t have enough alternative waste products to bind with the sludge.

Casella has explored other options, such as using virgin soils, which is soil that has not been used or touched previously, Weld said. But no other options make sense economically or environmentally, Weld said.

The Maine Department of Environmental Protection noted that other materials, such as gravel, woody debris, and construction and demolition debris, can be used to stabilize sludge in landfills. However, Casella’s preference is to use oversized bulky waste, which the company does not have enough of, said David Madore, a spokesperson for the department.

The department “understands that Maine’s wastewater utilities are in an untenable situation,” he said, and is working to find temporary solutions. “[T]hey are being forced to absorb huge

price increases and try to avert disaster at their facilities.”

Three years ago, it cost Bangor about \$400,000 annually to dispose of its sludge through a mix of composting and landfilling, said Smith, with the Bangor Wastewater Treatment Plant, which processes sewage from Bangor, Hampden and Hermon. Now that removal cost has skyrocketed to \$1.2 million annually.

Then last Thursday Bangor learned it couldn't dispose of its sludge in Juniper Ridge. Bangor is now sending two-thirds of its waste elsewhere, but it's unclear how much is going where.

If Bangor loses the option to divert its waste and must store it, the facility can store one to two weeks' worth in dry weather. In wet weather, however, that capacity shrinks to just one or two days, Smith said.



Phil Besse shakes the separators on a machine used in the dewatering process of waste at the Bangor Wastewater Treatment Plant on Main Street. Credit: Linda Coan O'Kresik / BDN

“If we don't remove those solids from the system, the biological system will fail, and the wastewater will not be properly treated before it hits the Penobscot River,” Smith said.

When Travis Peaslee, general manager of the Lewiston-Auburn Water Pollution Control Authority, was told last week that Juniper Ridge couldn't accept any more waste, Lewiston began storing the sludge in an unused covered facility. Peaselee estimated he can continue stockpiling waste for three to four weeks before he runs out of space.

"We're narrowing ourselves down to having next to no options," Peaslee said. "That's an uncomfortable situation to be in because if one variable fails, the whole state could fail, and I think we're starting to see that."

While that stockpiling space fills daily, Peaslee is looking for other smaller landfills that could temporarily take Lewiston's waste. If he needs to ship the waste to states outside of New England or into Canada, Peaslee estimated it would cost from \$300 to \$500 per ton.

Last year, the landfill disposal cost was \$95 per ton. It rose to \$192 per ton last week, Peaslee said.

If every other option fails, Peaslee said his only option would be to send the waste into the Androscoggin River.

After Juniper Ridge announced last week it couldn't accept sludge, Portland's waste is now being diverted to Canada through its Casella contract, said Scott Firmin, Portland's wastewater services director. It's unclear how much.

Prior to 2019, Portland's biosolid removal cost \$1.6 million annually. This year, it has budgeted \$3.2 million, Firmin said.

If Portland loses Canada as a disposal option, Firmin said the Portland facilities have the capacity to store the city's biosolids for about two weeks.

"Not being able to remove biosolids is a treatment plant operator's worst nightmare," Firmin said.