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Nurdle spill cleanup is 'too little, too late' as plastic pellets continue to spread, gather in drifts

BY TRISTAN BAURICK | STAFF WRITER

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Elizabeth "Liz" Marchio, Loyola University research assistant Katie Rompf, Loyola student Stephanie Oblena and AimŽe K. Thomas, Director do replicated science to see how the nurdle wash zones change over time along the Mississippi River by the Chalmette Battlefield in Chalmette. A shipping container spilled tons of nurdles in the Mississippi River. (Photo by Sophia Germer, NOLA.com, The Times-Picayune | The New Orleans Times-Picayune)

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At measured intervals along a stretch of sandy riverbank near the Chalmette Battlefield, three Loyola University scientists drop to their knees and set a small frame on the ground. Inside the frame's 1-foot by 1-foot enclosure, they find plenty of pebbles and twigs, but just as common are pearly white bits of plastic known as nurdles.

“It's been deeply disturbing,” Katie Rompf, a Loyola research assistant, said Friday. “It breaks my heart thinking about birds eating these and dying, and that this can affect the whole ecosystem.”

Small teams of scientists from Loyola and LSU are surveying riverbanks in the New Orleans area to learn the fate of the millions of nurdles that spilled into the Mississippi River from the cargo ship Bianca during a storm more than a month ago. Each frame is a snapshot of the wider impact. Scientists collect the nurdles

from each sample spot, count and weigh them and send them to an LSU lab for further analysis.



Nurdles pile up between rocks along the Mississippi River by the Chalmette Battlefield in Chalmette, La., Friday, Sept. 4, 2020. About a month ago, a shipping container spilled tons of nurdles in the Mississippi River. The shipping company hired a contractor to cleanup the small pieces of plastic. (Photo by Sophia Germer, NOLA.com, The Times-Picayune | The New Orleans Advocate)

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Nurdles are the raw material for nearly all plastic products. The lentil-sized pellets are melted down at factories and formed into everything from water bottles and drinking straws to clothing and car parts.

Most of the estimated 743 million nurdles that fell into the river on Aug. 2 are fated to remain floating trash and riverbank litter for a long, long time. That's because no cleanup effort was

launched until late August, about three weeks after the spill. The work has been limited to a small crew hired by the ship's operator. Their primary tools for tackling the immense mess have been leaf blowers and butterfly nets.

“It was too little, too late,” LSU oceanographer and plastic pollution expert Mark Benfield said.



Loyola University scientists survey the riverbanks as part of a larger effort with LSU to get a sense of the volume of nurdles that spilled along the Mississippi River by the Chalmette Battlefield in Chalmette, La., Friday, Sept. 4, 2020. About a month ago, a shipping container spilled tons of nurdles in the Mississippi River. The shipping company hired a contractor to cleanup the small pieces of plastic. (Photo by Sophia Germer, NOLA.com, The Times-Picayune | The New Orleans Advocate)

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Many of the nurdles have flowed into the Gulf of Mexico by now, he said. The rest are slowly making their way downriver or are embedded in the banks, tucked among rocks and plants, or

have been gobbled up by birds and small fish like anchovy and menhaden, which easily mistake nurdles for food.

“It can be lodged in (a bird’s) stomach, and they can become malnourished,” said Aimee Thomas, director of Loyola’s environmental program.

“And if a bird of prey eats that bird, it goes up the food chain.”

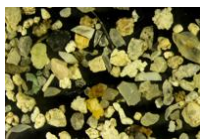
Also moving up the food chain are water pollutants that readily adhere to nurdles. These toxic tag-alongs, which include PCBs and pesticides, are released in the gut and absorbed into the animal. Eventually, the pollutants may end up in a catfish po-boy or a redfish on the grill.

In Chalmette on Friday, a count of about 30 nurdles was typical inside the Loyola scientists’ sampling frame. That’s nothing compared to what they found under the Gov. Nicholls Street Wharf in the French Quarter.

“I cried. It was that bad,” said Liz Marchio, a National Park Service science educator who is helping with the study. “They were like snowdrifts piled up. Inches deep with the river sloshing around.”

At Crescent Park, one frame's worth of nurdles filled a 5-gallon bucket.

"It was insane," Rompf said.



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At Chalmette, they found one of the 55-lb sacks that the nurdles were shipped in. In all caps was printed a warning: "DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER."

"Irony of ironies," Benfield said.

Several government agencies, including the Coast Guard, Port of New Orleans and the state Department of Environmental Quality, spent weeks trying to determine which of them should be responding to the spill. They eventually decided to leave it to the ship's operator, France-based CMA CGM Group, to undertake a voluntary cleanup. The company hired Texas waste management contractor U.S. Environmental Services, which started work during the last week of August.

CMA CGM and the USES declined repeated requests to discuss the cleanup.



Plastic pellets litter the New Orleans river front near Gov. Nichols Wharf on Thursday, Aug. 20, 2020. The pellets, which are used in plastic product manufacturing, spilled by the millions from a cargo ship on Aug. 2.

Liz Marchio

The scientists can't get them to talk either.

“They won't tell us how much was spilled or how much was recovered,” Benfield said.

From what's been seen of the cleanup effort, only a token amount of nurdles have been collected.

“Their cleanup approach seems to be to use leaf blowers to blow the nurdles into the water and then collect them against a boom,” Benfield said. Nurdles are then scooped up with what appear to be butterfly nets.



Elizabeth "Liz" Marchio, science education and outreach coordinator with Barataria Preserve Environmental Education Center, shows the nurdles she collected in a 2x2' area near Crescent Park in New Orleans, Friday, Aug. 28, 2020. A cargo ship spilled millions of plastic pellets called nurdles into the Mississippi River about a month ago. (Photo by Sophia Germer, NOLA.com, The Times-Picayune | The New Orleans Advocate)

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The method appeared effective for high concentrations of nurdles on smooth sandbanks but didn't appear to work in areas with rocks or vegetation.

A few small cleanups have been mounted by family and volunteer groups, but their work parties have managed a few pounds of nurdles at a time.

No government agencies have participated in the cleanup. DEQ encouraged CMA CGM to clean up the nurdles but did not require the work and is not overseeing it. Investigators haven't determined who is responsible for the spill and don't know yet if fines or other penalties will be issued.

Marchio is frustrated by the response.

“The cleanup methods definitely need to be improved,” she said. “And we need to deal with things like this faster. But that will only happen if people start rattling some cages about it.”



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