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Preserving structural integrity for years to come

Upcoming HOVMSD project will add lining to 5.5 miles of sewer pipe

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HOVMSD's interceptor rehabilitation project is expected to be completed by 2025, Brian Helminger said. Submitted Photo

FOX CITIES – Brian Helminger, district director of the Heart of the Valley Metropolitan Sewerage District (HOVMSD), said the team always has the community's best interests at heart.

That continued commitment, Helminger said, prompted HOVMSD to begin rehabilitation of Kaukauna's sewer interceptor in early 2024, which will involve placing an acid-resistant lining throughout the 5.5 miles of pipe that showed corrosion in a study done a few years back.

The interceptor, he said, is what receives the wastewater from the sewers and carries it to

the wastewater treatment plant.

“What triggered the project is the 2016 Televising videos that showed that the interceptor is starting to corrode,” he said. “The concrete is starting to degrade and we’re losing material off of the concrete mainly due to the atmospheric conditions found underground and in the piping... and that sort of acidity is attacking the concrete.”

Though the structural integrity of the piping remains intact, Helminger said “the longer we wait, the more concrete is destroyed.”

“The advantage would be to address that issue before it becomes problematic, rather than... waiting until something could potentially fail down the road,” he said.

Planning for the project, Helminger said, began in 2021, and is expected to be finished by 2025.

Why now?

Helminger said it’s important for HOVMSD to act now to protect the concrete in the pipe to keep the structural integrity of the interceptor for many years to come.

If they chose to ignore the warning signs and address the problem later, he said “the ultimate failure could be the implosion of the pipe.”

“Eventually, the inner layers of concrete and pea gravel would degrade due to acidic conditions until such time that we encountered the structural steel and rebar that also makes up that pipe,” he said. “That rebar then would start to corrode and rust and spall, which would further degrade the pipe to the point where structural integrity would no longer remain.”

Having to rebuild from scratch, Helminger said, would be “virtually impossible,” due to half of the interceptor being located in the bed of the Fox River.

“It was put there back in the ’70s,” he said. “The flow of the water allowed all the member communities to use gravity to transmit their flow from their community to the wastewater plant.”

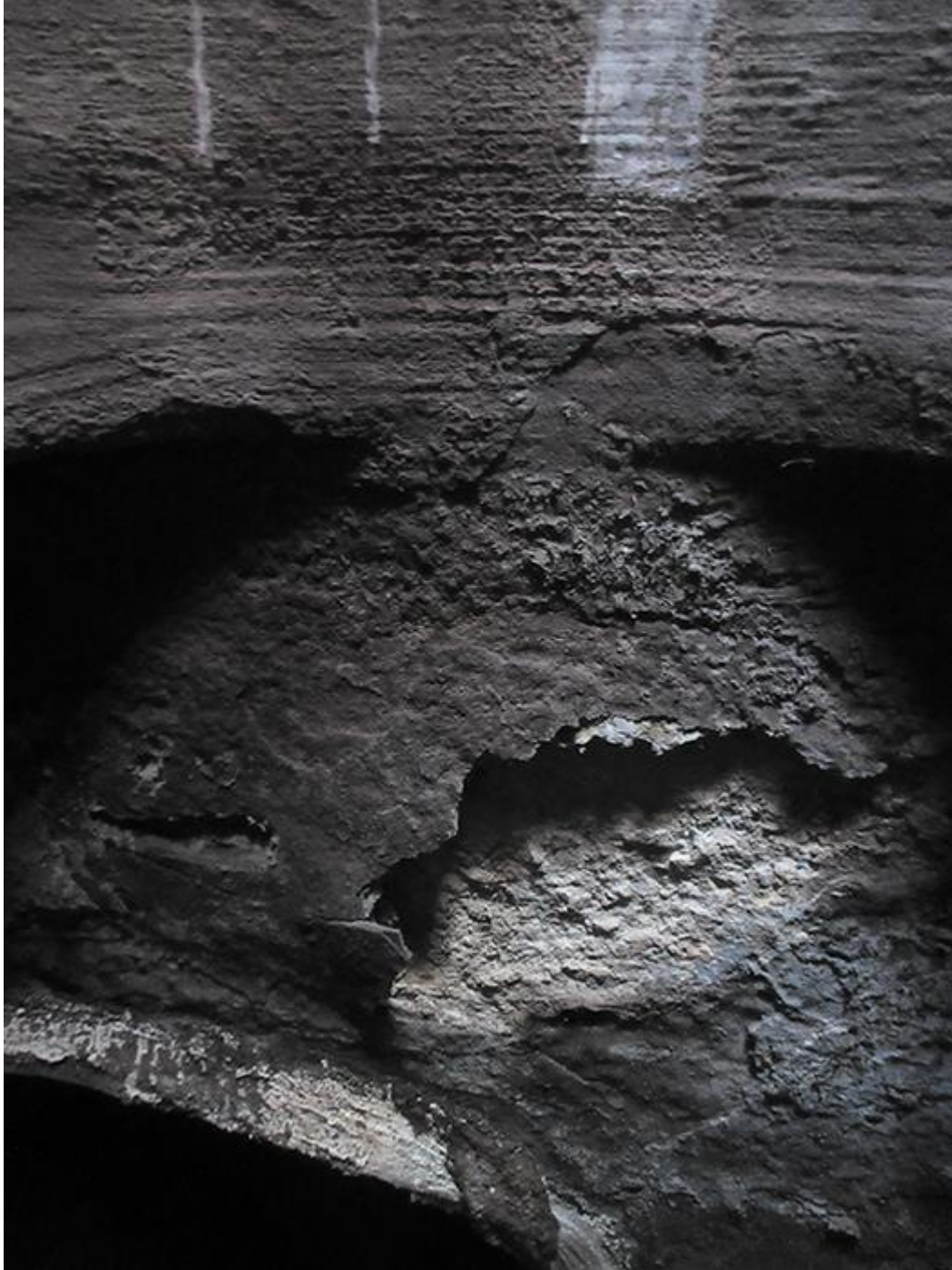
However, at this point, the infrastructure is “basically invaluable.”

“It’d be very difficult to get the permits (needed) to dig up on the Fox River at this point,” he said. “It’s almost to the point where you’d look at – sensibilities wise – if you were to want to relay that pipe on the bank of the river, that’s all developed property... That’s what makes this interceptor so important.”

The timeline

As of right now, Helminger said HOVMSD is in the process of attorney review for construction contracts, insurance and making sure “all i’s are dotted, t’s crossed.”

“We’re looking at seeing some work here probably shortly after the New Year, maybe February,” he said. “And that’s mainly preparatory work that will be done to gain access to the river.”



Inside the interceptor, some of the concrete has started to erode, which is why HOVMSD will be putting in an acid-resistant liner. Submitted Photo

The river sections of the pipe, Helminger said, will need to be worked on via a boat and

barges, and, due to the nature of Wisconsin that is why the project will take both 2024 and 2025 to complete.

“The majority and the lion’s share of the river work that everyone’s going to see and potentially be impacted (by), will be in 2024,” he said.

Once the project is complete, Helminger said the new acid-resistant lining is expected to last a minimum of 50 years, according to the cured-in-place-pipe lining (CIPP) method.

“CIPP hasn’t been in existence for 50 years at this point, and so to say that 100% it’s going to last 50 years, that’s an estimate, as we don’t have that 50 year history yet,” he said. “But given the circumstances and the acidic environment of the piping, the CIPP liner is inert to acid, so it shouldn’t affect it at all.”

Funding

To receive the funding for the project, Helminger said HOVMSD applied for a loan through the DNR’s Clean Water Fund Program, which has a 20-year payback cycle for principal and interest.

“The rate structure will have to be modified to incorporate the debt service payments that we’re going to be taking on, but that won’t start until after the project has been completed,” he said. “The advantage for municipalities using the Clean Water Fund loan is it’s an interest rate subsidized loan, and it makes building these projects and paying for them cheaper in the long run.”

In August of this year, Helminger said Visu-Sewer, Inc. out of Pewaukee was awarded the contract for the interceptor rehabilitation project, with a bid of \$18,148,027.

Business benefits

While businesses most likely won’t see a direct greenback or dollar impact going into their pockets, Helminger said rehabilitating the interceptor will increase the reliability of the existing infrastructure and extend its life.

“It’s a less-costly endeavor than if we were to let things go, or had we not been doing the inspections and we’re unaware, it could have resulted in higher and higher utility rates,” he said. “The potential for having to replace the pipe is so distasteful that we’re compelled to do this project as soon as we can.”

Helminger said he hopes both current and future businesses in the Heart of the Valley area “have confidence” in the fact that the existing infrastructure is sound and well-maintained for a long time, which also means a reasonable cost of utilities in the general area.

HOVMSD, he said, is trying to push hard to get public awareness and understanding of the project. “We’re doing our best to keep everything up to date as much as we can,” he said.