

Risk remains in river: Prof says waste pits cap still vulnerable

Christopher James | Jun 24, 2018 Updated 18 hrs ago



Divers for EPA Region 6 inspect the northwest corner of the San Jacinto Waste Pits.

Submitted photo

To better understand the extent of damage the San Jacinto River Waste Pits received in the wake of Hurricane Harvey, a local geologist assessed the damage and the response.

Dr. Kathleen Garland, who was asked by the San Jacinto River Coalition to evaluate the damage, reviewed data provided by the Environmental Protection Agency and the Potentially Responsible Parties, which confirmed a release of dioxin-contaminated waste that was highly concentrated. It also highlighted the inherent risk posed by this site and the need for the EPA to expedite the complete removal of the waste from the riverbed.

“Overall, any material losses that there were would have been small, but there was some small amount of material released,” said Garland. “And it continues to show us, I think, that this site is vulnerable and we keep dodging a bullet. The sooner we can get that waste removed from the river the better we will be and we won’t have the chance that it in any way it gets eroded and moved back into the river system.”

The initial concern during and after Harvey was the fact that there were nine days’ worth of elevated water levels in the San Jacinto River.

“These elevated water levels took place over a very long period of time, and during that time you could imagine there’s all sorts of things going on under the water,” said Garland. “Lots of currents, lots of eddies, lots moving of sediment, things getting eroded, things getting filled in and it’s just a very dynamic environment.”

Once the site waters receded, the initial response by the EPA and the PRPs included physical surveys of the cap surface both above and below water level. They probed the site on a 30-foot by 30-foot pattern using steel rods, used EPA divers to conduct physical examinations and conducted sediment sampling and analysis in areas of interest.

Responsible party contractors carried out the initial physical survey and sampling and were accompanied by EPA staff during the probe survey and later sampling activities.

To conduct the probing survey, the EPA set up a grid on a spacing of 30-feet by 30-feet and pushed 4-foot steel rods into the cap to measure the thickness of the armor and determine if the underlying geotextile membrane was still in place. They surveyed about 900 points across the site and found 38 areas of interest.

“The idea was to find those areas on the surface where there was damage, make sure it was documented and then obviously go out and get it repaired,” Garland said. “But the primary conditions that were found included rock armor that was either thinned or absent, and the geotextile was exposed at the surface. And in some places everything found and then there were three or four feet of sediment found on top of it. So it was actually buried by river sediment.”

The agencies also compared maps of the cap surface from before Harvey and after to see the differences between shape and elevation of the surface.

“What the contractor did in order to show us the difference was they basically overlaid those two maps and created a map of the changes that had taken place during the storm,” said Garland.

The map showed areas of the cap that experienced erosion while other areas experienced deposition of additional sediment.

“Over on the western side we had a lot of erosion that was taking place outside the cap, but it was of great concern to the EPA because it approached the cap very closely,” Garland said.

The northwestern side of the site was an area with the most concern because it has no geotextile in the area because it has a very steep slope there.

“If you lay down a geomembrane and put rocks on top of it the rocks fall off,” said Garland. “It’s very easily eroded if you put a geomembrane there. It just has a layer of mixed rocks that holds everything together and armor on top of it.”

The EPA wanted to focus on this problem area and took 14 sediment samples. And one of the samples confirmed the protective cap had been damaged and the underlying waste material was exposed. The EPA said the sample showed dioxins at 70,000 nanograms per kilogram, which is the highest concentration found outside of the cap. To put it into perspective, the EPA level for cleanup is 30 nanograms per kilogram. However, it was a small release.

“The waste pits themselves are basically in their original configuration. There’s no major erosion, there’s no areas that have large gaps, there were no big erosive features, so my conclusion there is it was a small amount of material that was released, probably from that northwest side,” said Garland. “It was able to move downslope, mixed in with the local sediments during the flood but there is no major release from the site because the whole configuration of the site pretty much looks like it did before the floods took place.”

For more than four decades, the San Jacinto River Waste Pits, which were used as a site to dispose of paper mill sludge by Champion Paper, have plagued the San Jacinto River. Containing mercury, PCBs, furans and cancer-causing dioxins, the waste pits have sat in the river with a temporary armored cap since 2011 that was installed to prevent any release of toxins from the site.

For more information visit www.epa.gov/tx/sjrwtp.

Environmental watchdogs want more fishing advisory signs.

Although seafood advisory signs are scattered along the San Jacinto River, citizens continue to fish.

When the Environmental Protection Agency was in Highlands two weeks ago, Jacquelyn Young, director of the Texas Health and Environmental Alliance, asked that they require more fish consumption advisory signs be put up.

“Jack Morman, came over to me on the side and said, Harris County can pay for some of those signs. It’s the least we can do to help you guys,” said Young.

From that point, Young’s email has been inundated with requests from Harris County, EPA, the Galveston Bay Foundation, Harris County Pollution Control and the Texas Department of State Health Services to understand where signs are right now and where they need to be. With that, Young is looking for public input about locations where people fish that doesn’t have any consumption advisory signs.

Anyone with information should email young at jyoung@txhea.org.

The county is currently trying to figure out the current status of each existing sign and wants to hear about new locations.

“In public meetings around our communities, we consistently hear there are not enough signs,” said Young.

Several members of the San Jacinto River Coalition said they continuously see people fishing for food.

In addition to adding signs, Brandt Mannchen suggested a more proactive approach by providing alternative fishing spots.

“It would really help, I think, if you could approach people and have some places they could go fish where there isn’t a concern,” said Mannchen. “Because if you just say don’t fish there and they’re fishing for sustenance they’re going to fish. But if there are a few places that aren’t too far away you could point to that might get at least some people to leave this area and go somewhere else.”

Dioxin and PCBs remain a problem in the Houston Ship Channel, Galveston Bay and the San Jacinto River as “legacy pollutants.” While the production of both classes of pollutants has been outlawed for many years, both stay in the environment for many years and tend to accumulate in species of fish that have high lipid fat levels, according to the health department. Eating contaminated fish can lead to the toxins accumulating in the human body as well.

The primary concern in the San Jacinto River has been the San Jacinto Waste Pits, a former landfill area, now submerged at the Interstate 10 San Jacinto River Bridge.

Under the current advisory:

- Children under 12 and women of childbearing age should not consume any fish or blue crab from the Houston Ship Channel or from the San Jacinto River between the Lake Houston Dam and the Fred Hartman Bridge. Other persons should limit consumption to one serving a month. Dioxins, PCBs and pesticides exceed state standards.