

# Pasadena Citizens' Advisory Council

www.pasadenacac.org

Summary of  
Tuesday, October 24, 2017 Meeting

## SAN JACINTO RIVER WASTE PITS SUPERFUND SITE, INCLUDING CHEMISTRY 101 LESSON ON DIOXIN

Scott Jones, Director of Advocacy for the Galveston Bay Foundation (GBF), gave a brief history of the San Jacinto River Waste Pits, including a chemistry lesson on dioxins and why/how the pits were placed on the Superfund National Priorities List. Pasadena Citizens' Advisory Council (PCAC) members asked for the update because waste in the pits originated at the former Champion Paper Mill in Pasadena. Jones was invited to speak because he has coordinated GBF's work as the recipient of the US Environmental Protection Agency (EPA) Technical Assistant Grant (TAG). In this role, GBF has produced signs warning the public against the taking of fish in the contaminated area.

During 1965-1966, the former Champion Paper Mill in Pasadena deposited some of their waste, which contained dioxins, at a site operated by McGinnis Industrial Maintenance Corporation on the shores of the San Jacinto River near I-10. The pits were subject to many floods and are now partially submerged due to subsidence. It is estimated that the pits contribute to between 40-60% of the dioxins found in the Bay.

Dioxins do not dissolve easily in water and can attach to soil or plankton and settle to the bottom. The plankton is eaten by small fish, which in turn are eaten by larger fish and so on. This leads to bioaccumulation and biomagnification (a buildup of toxins) in the food chain. One of the most toxic of the dioxins is 2,3,7,8-TCDD, which is formed during the chlorine bleaching process used by pulp and paper mills. Dioxins are known to cause birth defects, cancer, and other serious illnesses. While dioxins are found in most body tissues, the highest concentrations are found in the liver and body fat. The average time that it takes to remove one-half of the amount of 2,3,7,8-TCDD from the body is 7-12 years.

In 2005, Texas Parks and Wildlife staff found a grayish material on the site, which was later determined to contain dioxin. The site was placed on the Superfund National Priorities List in 2008, with McGinnis Industrial Maintenance Corporation and International Paper Company listed as potentially responsible parties. Testing of the soil in the footprint of the old pits revealed a level of 44,000 parts per trillion (ppt) of 2,3,7,8-TCDD (approximately 220 times the safe limit).

During 2010-2011, a temporary cap was placed on the site; however, because the northwest quadrant was submerged, no liner could be placed under the rock cap. In July 2012, a 10-year storm event caused the cap to erode (even though the cap was purportedly designed to withstand a 100-year storm event.)

By 2014, the EPA called for an Army Corps of Engineers third party review of the responsible parties' proposed cleanup plan. A dive team discovered a hole in the northwest quadrant of the cap in December 2015, where the diver could access it by sinking into it, leading to the possibility of some types of organisms being able to do the same. The EPA took over the completion of the feasibility study in the Spring of 2016 and by August 2016, the Corps released their evaluation. The Corps did not make any recommendations, only answered the questions asked of them by EPA. In September 2017, the EPA called for a partial removal of contaminated soil from the site. GBF and others urged for the full removal of contaminated soil.

Hurricane Harvey's impacts on the site included erosion of some parts of the armored cap, damage to the east side of the cap, and about 20,000 sq. ft. of the river bottom eroded in the vicinity of the cap. Testing indicated that a section that had 70,000 ppt dioxin had been exposed to the river. Elevated concentrations of dioxin in the water near the pits were detected. Because dioxin does not dissolve in water, it is unusual to see concentrations that high in water. 2,3,7,8-TCDD was detected at 4 times the background concentration. EPA Administrator Scott Pruitt visited the site after the storm.

On October 11, 2017, the EPA ordered that a full removal be completed at the site, using a cofferdam around the whole site (to dry out the area and protect the river), with removal being done in sections. Post clean up levels for the northern impoundments (closest to river) should leave the area safe for recreational fishing (30 ppt). The southern impoundments (closer to other industrial sites) will be cleaned to 240 ppt. All excavated material will be placed at a facility that was designed and permitted for hazardous waste and that has a good compliance record.