

Pasadena Citizens' Advisory Council

Summary of January 22, 2013 Meeting

Stormwater Management in Industry and the City: *Another Way to Protect Water Quality*

With a longterm interest in water quality, the Pasadena Citizens' Advisory Council addressed the water quality impacts of rainfall and flooding—stormwater--by inviting representatives of industry and the City of Pasadena to speak in January 2013. Tyrone Barren of Oxy Vinyls, a plant with a stormwater permit, described how industry typically manages the rainfall that falls on their site to reduce the chance that storms will carry chemicals from the plant to the water bodies into which its land drains. Luz Locke and Bianca Locke spoke for the City of Pasadena, describing why and how it manages stormwater to reduce the chance that point sources and nonpoint source pollutants of water pollution will impact the water quality of the Houston Ship Channel and the bayous and tributaries that drain into it—and Galveston Bay, to which they all flow. The city brought table-size models to help members understand stormwater flow and how it may affect water quality. Along with Locke and Locke, construction site environmental inspector Joe Resendez served as a resource as members examined the models.

Members learned that both the city and industry take stormwater management seriously. They were surprised to find that flood insurance rates are affected by the city's best practices and community outreach. Details may be found in attached slides.

Industrial Stormwater Management

Industrial stormwater discharges to water bodies are regulated by the Environmental Protection Agency's National Pollutant Discharge Elimination System, as carried out by the State of Texas. The state requires industrial facilities to have discharge permits that impose limitations on the discharge and require monitoring of water quality. Construction sites one acre or larger must be permitted during construction activity.

The stormwater discharge permit authorizes certain non-stormwater discharges that are not contaminated with chemicals. The permit also prohibits discharges that would impact water quality, such as wash waters from drums or tanks or from material handling or process areas.

When facilities apply for a general stormwater permit, they must develop a stormwater pollution prevention plan to identify sources that may affect the quality of stormwater discharges and establish best practices and controls to ensure compliance with the permit. A Stormwater Pollution Prevention Team must be formed to help carry out the best practices laid out in the plan, reevaluate them on a set schedule, and revise them as needed.

Best practices include good housekeeping to minimize trash and debris that could be flushed into the stormwater system. Best practices also call for separating hazardous and nonhazardous materials, and using dikes around areas where chemicals are loaded and unloaded. These include permanent dikes built around tanks and temporary dikes under portable equipment. To prevent

spills from reaching water bodies, sumps collect spills for treatment. Signs are used to remind workers of best practices and also to show them where boxes with spill cleanup materials are kept around the plant to facilitate quick response to a spill. Maintenance, inspections, sampling, and training are also all essential to a plant's stormwater management plan as are drills to practice emergency response. The permit includes a set schedule for inspections, which are carried out quarterly by the Stormwater Pollution Prevention Team. Sampling of stormwater is required at least quarterly and sometimes daily, with metal samples taken annually. One of the challenges is taking samples within 30 minutes of the stormwater discharge during a representative storm event. The plant must be ready to carry out those sampling requirements when the rain comes. Details and photos available at www.pasadenacac.org.

City of Pasadena Stormwater Management

Pasadena is a flat coastal city with a population of about 150,000 that includes 8 major watersheds where bayous carry water Galveston Bay or first to the Houston Ship Channel and then to Galveston Bay. The city's sanitary sewer system and stormwater drainage systems are separate. Sanitary sewage from homes and businesses travels through the sanitary sewer system to a wastewater treatment plant. Stormwater flows from streets, parking lots, and other surfaces to stormwater drains, pipes, and water bodies that eventually take it to Galveston Bay.

The city has a Municipal Separate Storm Sewer System (MS4) permit. It requires the city to have and enforce regulations, inspect construction and other activities that could affect water quality, monitor 121 miles of channels in the city, inspect 160 existing detention basins, monitor 541 existing outfalls, monitor sanitary sewers for broken lines or infiltration, investigate illegal dumping, and conduct sampling for water quality. In general, the permit promotes water protection and conservation and pollution prevention. It also requires the city to promote community participation because individuals as a whole significant contribute to water quality problems.

The city carries out its permit requirements in conjunction with the Harris County Flood Control District. The city's efforts to manage stormwater not only help the environment but also have an impact on the Community Rating System (CRS) of the National Flood Insurance Program (NFIP). The city's CRS score is used by NFIP to calculate the cost of flood insurance for home and business owners. Discounts are made available for things such as the city's public information program, which recently was selected as a national model, as well as mapping and regulations, flood damage reduction, and flood preparedness.

PCAC community and plant members can help improve stormwater management and the city's CRS score by helping the city distribute materials to our organizations or during our events; adopting a waterway, trail or park; using best management practices in our own lives; and taking steps to prepare for a flood. Trash Bash is an example of how people can volunteer. This year it is March 23 at 17 sites. The city's site will be at Armand Bayou-Bay Area Park. Efforts such as these could help move the city's CRS rating from the current score of 7 toward 1, the best score.

Discussion of flood insurance revealed that the city and the Harris County Flood Control District want everyone to realize its importance. Flood insurance is available to all, not just those in a designated floodplain. Even those who don't live in the floodplain are subject to flooding from a heavy rain event that overwhelms the stormwater system, an event that is not uncommon in this

area. Insurance is available for both buildings and contents. Renters may buy flood insurance for contents. A member asked about neighbors receiving different FEMA ratings on their insurance. Those with such concerns may contact Luz Locke for assistance. Details about the city's presentations may be found at www.pasadenacac.org