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Rain Garden Construction in Baffin Bay Watershed at Sarita Elementary School

Sarita, TX- South Texas may seem synonymous with dry and dusty, conjuring thoughts of cactus flowers and dried creek beds. While this may be the case during times of drought, the region can also be characterized as lush, green, and thriving when the conditions are right. Coastal prairies make up much of the habitat along this stretch of the coast, but with coastal development encroaching on natural landscapes, rainfall that would once soak into the ground and gradually drain into the creeks and eventually the bay, now often stays trapped on the surface, causing flooding, or flows straight into the storm drain, picking up pollutants and debris along the way to the bay.

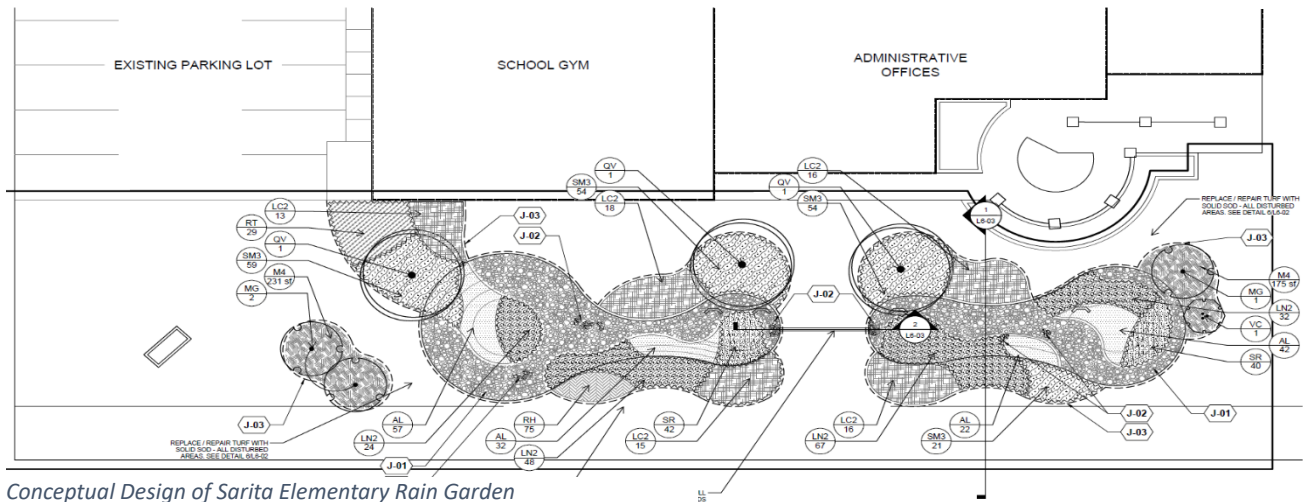
Green stormwater infrastructure describes systems and practices that use natural processes to manage stormwater runoff, reduce flooding, improve water quality, and in turn enhance community resiliency. It includes using strategies like specifically chosen plants and permeable pavement to soak up rainwater, and rainwater harvest and reuse infrastructure to store water onsite for later use.

Given the growing concerns surrounding flooding, stormwater management, water quality and water availability, CBBEP is preparing to construct a raingarden made possible thanks to a generous grant from the Rotary Club of Corpus Christi and Rotary International. The rain garden being built at Sarita Elementary School in Sarita, TX will not only improve the drainage and water quality in the area, but also enhance classroom curriculum and science TEKS by providing hands-on, outdoor learning opportunities for students of all grade levels.



Successful Rain Garden by San Antonio River Authority

Sarita Elementary School is located in the Baffin Bay watershed, which is considered the jewel of the Texas coast because of its historic recreational fishing opportunities. However, high bacterial loads and excess nutrients have impaired the watershed, threatening the health of the people and organisms which rely on Baffin Bay. Research has identified urban runoff from impervious surfaces as a contributor to water quality decline, and rain gardens as a cost-effective way to reduce the pollutants entering the bays and estuaries downstream.



With the design phase complete, construction of the rain garden is set to begin during the fall of 2024. The design of this rain garden will include two swales, or shallow depressions, that will help collect stormwater runoff as the carefully chosen native vegetation and soils work to filter and retain the runoff from areas prone to flooding. Not only will this rain garden reduce impacts of stormwater runoff and water quality concerns, but also help to beautify the campus with colorful plant life and crisp landscaping. Larger trees such as Southern Magnolia and Southern Live Oak will be planted outside of the swales, with shrubby species like Texas Compact Sage and Mexican Feathergrass going in along the edge of the depressions, followed by aquatic tolerant species like trailing lantana, longspur columbine, and raspberry autumn sage more centralized in each swale. These plants require less maintenance once established, have deep roots that soak up lots of water quickly, and provide food and habitat for wildlife.



Rain Garden of Similar Design Completed by VSWCD

This approach to stormwater management allows more of the rain that falls to soak into the ground quickly before flowing into ditches, drains, and eventually the bay. The plants and soils filter and clean the water of pollutants before it enters the waterways that will carry it into our bayous, bays, and estuaries. We're excited to see what this improvement can bring to the Sarita Elementary School students and staff in the coming years!

The Coastal Bend Bays & Estuaries Program is a non-profit organization dedicated to protecting and restoring bays and estuaries in the 12-county region of Texas Coastal Bend. CBBEP is partially funded by the Texas Commission on Environmental Quality and the U.S. Environmental Protection Agency. For more information about the Coastal Bend Bays & Estuaries Program, contact Quinn Hendrick, 361-336-0305 or qhendrick@cbbep.org. Published in May 2023.

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