



People • Power • Progress YEARS

Date: April 18, 2023

To: Chairman King and the Members of the House Committee on Natural Resources.

CC: Rep. Ed Thompson, Rep. Erin Elizabeth Gamez, Rep. Kyle J. Kacal, Rep. Stan Kitzman, Rep. Suleman Lalani, Rep. Will Metcalf, Rep. Four Price, Rep. Ana-Maria Ramos, Rep. Glenn Rogers, Rep. Erin Zwiener

Via hand delivery and by email.

From: Adrian Shelley, Public Citizen, ashelley@citizen.org, 512-477-1155

Re: HB 585 – Public Citizen supports a catastrophe plan for water treatment facilities.

Dear Chairman King and Members of the Committee:

Public Citizen appreciates the opportunity to testify in favor of HB 585 by Representative Richard Peña Raymond, relating to the creation by the Texas Commission on Environmental Quality of a plan to protect water treatment facilities from catastrophes.

Water treatment facilities are vulnerable to catastrophes including heavy rain.

Water treatment facilities in Texas are vulnerable to catastrophes including those listed in the bill: electrical outages, catastrophic weather, malicious attacks, and the effects of climate change. HB 585 directs the Texas Commission on Environmental Quality (TCEQ) to develop a plan to protect facilities from these and other potential disruptions.

On the subject of “catastrophic weather,” one thing to consider is the increasing frequency of extreme rainfall events. In just a twenty-year period, Harris County experienced four so-called “100-year” rain events and six “25-year” events:¹

Table 1: Severe Storms in Harris County

Date	Storm	Rainfall	Frequency	Fatalities	Damage (est.)
Aug. 27, 2020	Hurricane Laura ⁶	10-15"	25 year	42	\$19 billion
Sept. 19, 2019	T. S. Imelda ⁷	24-36"	100 year	5	\$5.1 billion
Aug. 27-29, 2017	Hurricane Harvey ⁸	60.5" ⁹	100 year	89	\$125 billion
Apr. 18, 2016	Tax Day Flood ¹⁰	17"	100 year	8	\$2.9 billion
Oct. 31, 2015	Halloween Flood ¹¹	10-15"	25 year	2	\$30 million
May 25, 2015	Memorial Day Flood ¹²	10"	25 year	31	\$2.8 billion
July 14, 2012	n/a ¹³	10"	25 year	-	-
Apr. 28, 2009	n/a ¹⁴	10"	25 year	1	-
Sept. 13, 2008	Hurricane Ike ¹⁵	11"	25 year	112	\$36.9 billion
June 8, 2001	T. S. Allison ¹⁶	30-40"	100 year	43	\$12.7 billion

¹ See <https://www.citizen.org/article/under-water-unaware/>.

Treatment plants regularly fail due to heavy rains. A few recent examples:

- The City of Nacogdoches Wastewater Treatment Plant has overflowed 100,000 gallons of sewage and rainwater into Lanana Creek on at least three occasions²
- 4-5 inches of rain overwhelmed Beaumont's wastewater treatment capacity in November 2022.³
- Seven inches of rain in six hours overwhelmed the City of Wharton in June 2019.⁴
- San Angelo's wastewater treatment plant was overwhelmed by rain in June 2019, send 600,000 gallons of wastewater into the Concho River.⁵
- Austin issued a boil water notice for one million residents after rain overwhelms water treatment facilities in October 2018.⁶

We recommend updating forecasts for extreme rain events using newer data from NOAA's Atlas-14.⁷

Climate change presents other challenges to water treatment plants.

Climate change will bring other impacts beyond heavy rain events. These may include:⁸

- Drought, leading to corrosion and wear.
- High temperatures, leading to increased odors.
- Hurricanes, including storm surge and heavy winds, threatening infrastructure.
- Sea-level rise leading to flooding, floating equipment, and infrastructure damage.

We support including the projected effects of climate change in the plan.

In conclusion, we ask you to support HB 585 because it will create a plan to protect water treatment plants from catastrophes.

² See March 2022: <https://www.ketk.com/news/local-news/nacogdoches-wastewater-treatment-plant-overflows-100000-into-lanana-creek/>; May 2021: <https://kfox95.com/wastewater-treatment-plant-overflows-in-nacogdoches/>; May 2019: <https://www.ktre.com/2019/05/20/unprecedented-rainfall-causes-overflow-nacogdoches-wastewater-treatment-plant/>.

³ See <https://www.12newsnow.com/article/news/local/city-of-beaumont-statement-regarding-recent-sewer-issues/502-1d5182ca-40b3-42b5-818e-a8300ae2b07c>.

⁴ See <https://www.khou.com/article/weather/heavy-rain-inundates-wharton/285-4d13b9fe-fedb-4821-b243-415c18283f68>.

⁵ See <https://www.gosanangelo.com/story/news/local/2019/06/03/wastewater-spill-near-san-angelo-puts-private-wells-under-boil-notice/1327471001/>.

⁶ See https://www.washingtonpost.com/national/water-water-everywhere-/2018/10/24/9150a644-d721-11e8-a10f-b51546b10756_story.html.

⁷ See <https://www.noaa.gov/media-release/noaa-updates-texas-rainfall-frequency-values>.

⁸ See Hughes, James et. al. "Impacts and implications of climate change on wastewater systems: A New Zealand perspective" *Climate Risk Management* 31 (2021) 100262 available at <https://www.sciencedirect.com/science/article/pii/S2212096320300528>.