



Hurricane Harvey Response Plan Brief October 2017

Hurricane Harvey is a turning point for Greater Houston. Flooding in 2015, 2016, and 2017 shows that the current business-as-usual model is not working as intended. Our region needs vision and funding to create resiliency and restore confidence. Our future depends on conveying storm-water safely to the Gulf and keeping it out of our homes, businesses, and schools. Regional solutions will cost tens of billions of dollars to implement but will save lives and hundreds of billions, potentially trillions, of dollars in flood losses and losses to the regional and national economies. We must act quickly to buyout flooded homes, improve conveyance and standards, construct better detention projects, and rehabilitate and maintain existing facilities and infrastructure.

A. Federal Projects—Improve Houston’s Resiliency

1. *Cypress Creek Reservoir Authorization, Construction:* On an expedited basis, acquire land and permit and construct a third reservoir upstream of the Cypress/Addicks Overflow area. This third reservoir would protect Addicks and Barker Reservoirs and a 685 square-mile area from Cypress and Katy to downtown Houston and the Houston Ship Channel.
2. *Addicks & Barker Reservoir Restoration & Improvements:* Restore Addicks and Barker Reservoirs to original capacity by removing all sediment and invasive species that have accumulated since the reservoirs were constructed. The U.S. Army Corps of Engineers (USACE) should consider adding more capacity by excavating inside the reservoirs and acquiring additional land for inundation. USACE should investigate other ways to improve operations to safely convey flows from the reservoirs to the Gulf.
3. *Strategic Home Buyout/Property Acquisition:* Expedite purchase of repetitively impacted homes and land along Buffalo Bayou and other waterways that flooded. With quick action, home buyouts can offer victims real, timely help, save taxpayer dollars, and create additional drainage capacity and new parks and greenways that connect the region.
4. *Buffalo Bayou & Other Conveyance Improvements:* To prevent catastrophic loss, acquire rights-of-way and improve Buffalo Bayou to safely convey 15,000 cubic feet per second (cfs) downstream of Addicks and Barker Reservoirs as originally planned by USACE. Similarly acquire land and improve conveyance in Cypress, Little Cypress, and Spring Creeks.
5. *Other On-Going Flood Control Projects:* Advance federal funds for other USACE projects in the Harvey-affected areas to speed completion of projects. All regional flood control projects must provide retention, conveyance, and connections that maximize public benefit. All projects need regular maintenance and study to ensure that they perform well.
6. *Little Cypress Creek Reservoir Authorization & Funding:* The Little Cypress Creek watershed covers 52 square miles and cannot handle more than a six-inch rain event in 24 hours. A Little Cypress Creek Reservoir would upgrade service and benefit 319 square miles downstream.



B. State Projects—Guide, Plan & Construct

1. *Regional Coordination; State Funding Assistance:* Flood waters do not stop at county or city lines. The state should assist with coordination of regional flood control projects. The Texas Water Development Board should have an expanded role in flood control, including funding and authority to provide financing assistance on major flood control projects similar to its role in regional water projects (i.e. SWIFT). The State should quickly direct Rainy Day Funds, in the form of both loans and grants, to help with the rainiest days in our nation's history.
2. *State Highway Evacuation Routes:* Improvements to Grand Parkway, Highway 6, and FM 529 and planning and funding for State Highway 36A should be prioritized to ensure fast-growing portions of Harris, Fort Bend, Brazoria, and Galveston County can evacuate safely.

C. Local (County & City) Projects—Collective Efforts

1. *Increase Funding:* The total cost of the recommendations in this plan brief likely exceeds \$32B. Local entities must provide matching funding for federal projects and revenue streams sufficient to obtain state-supported bonds. The West Houston Association will support efforts to increase funding for flood control from local entities to levels necessary to match funds.
2. *Local Standards Review & Improvements:* Development standards in the region should address the conditions that the region has experienced the last several years. Local entities should review and if necessary upgrade local inlets and storm sewers in neighborhoods that experienced flooding in any of the last three years. All wastewater treatment plants need clearance of 2 feet above the 500-year flood plain or 8 feet above natural ground, whichever higher and major storm plans that reduce public health risk and service outages.
3. *Local Transportation Reliability:* Major roads such as Beltway 8, Westpark Tollway, Eldridge, Dairy Ashford, Kirkwood, and Clay must be improved to make them more reliable in major storms and in some cases expanded to provide adequate evacuation routes.
4. *Master Watershed Plans:* Harris County Flood Control District should publish Master Watershed Plans by December 1, 2017, with descriptions of all conceptual improvements and estimated costs necessary to provide 100-year flood protection on all waterways throughout Harris County. Adjacent jurisdictions should work on similar plans.