



CITY OF HOUSTON

Recovery Office

Interoffice

Correspondence

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Subject: West Fork of the San Jacinto River: Summary of the Dredging Projects

The "Plea for Three" local campaign was started in December 2017 in response to extensive community outreach from residents and business owners within the Lake Houston area. As a result, State officials contacted FEMA to discuss the removal of the debris within the West Fork of the San Jacinto River resulting from the occurrence of Hurricane Harvey. The specific reach of concern for the debris included eight (8) miles in length starting from the confluence of the river and Lake Houston to the upstream crossing of US Highway 69 over the river. While several meetings have taken place with federal and state agencies to include portions of the reach for debris removal, additional work and expansion of dredging operation is still needed to provide relief to the area.

On April 2, 2018, representatives of the City of Houston and Harris County Flood Control District attended a meeting at the Texas Joint Recovery Office in Austin. Numerous agencies were represented at the meeting including TDEM, FEMA, and the US Army Corps of Engineers. At the meeting, the local representatives were informed by FEMA that the federal agency was issuing a mission assignment to the Corps to develop a dredging project along the West Fork of the San Jacinto river. The Corps was to be responsible for determining the scope of work, preparing dredging plans, locating disposal sites, bidding the project, and managing the construction operations. An analysis was completed, construction plans were developed, and project was bided in June 2018. The reach to be dredged was determined to include approximately 2.5 miles upstream and downstream of the crossing of West Lake Houston Parkway.

Due to the limited scope of the Corps project and growth of the sand bar, residents and community leaders indicated the need for the scope of dredging operations to be expanded. This sand bar is commonly referred to as the mouth bar, located at the confluence West Fork of the San Jacinto with Lake Houston, and observed through historical aerial maps. On October 11, 2018, a meeting was held with representatives from TDEM, FEMA and the Corps to discuss this request. The City engaged the TWDB to obtain a bathymetric survey of the area and combined the obtained LIDAR data of sand deposits above the waterline. Through this exercise, our consultants were able to determine total volume of material deposited. At the meeting, FEMA requested for the Corps to review the data provided by the City's consultant. The City was also advised by the Corps that future dredging operations would require a new disposal site since the current Corps operations would utilize the two existing disposal sites to their full capacity. This triggered the identification and permitting of a new disposal site.

On December 10, 2018, TDEM and FEMA conducted a meeting with representatives from the City and Harris County Flood Control District to discuss ongoing local recovery efforts including the possible dredging project at the mouth bar. Representatives from the Corps office were also present. At the meeting, the City was advised that Corps staff was unable to determine, with any level of accuracy, the volume of debris material deposited near the mouth bar directly associated from Hurricane Harvey. They indicated that additional data collection would be required but did not have the resources, funding, and staffing available to perform the necessary tasks. The City agreed to meet with the Corps staff to discuss their initial findings and outline an acceptable method to obtain the required data.

On December 14, 2018, a follow up meeting with the Corps was held in which staff provided the City a map highlighting the limits of focus area for data collection. Corps staff also recommended that the City contact a geomorphologist to assist in the data collection and analysis. Dr. Tim Dellapenna, a geomorphologist from Texas A&M Galveston, was contacted and subsequently, he submitted a proposal to provide the field data collection and technical analysis services with anticipated completion date of March 2019. Due to contractual issues between the City and the Texas A&M system, the City elected to utilize TetraTech, our recovery consultant, to provide the services. The methodology utilized for the analysis is comparable to the "Stockton Protocol" for identifying storm deposited sand in bodies of water, which has been previously approved by FEMA for Hurricane Sandy recovery efforts in New Jersey. The City received the draft final report on March 23, 2019 and is currently reviewing the results. The final report will be submitted to TDEM and FEMA during the week of April 8, 2019.

On a parallel path, pursuant to the Corps instruction at the October 11 meeting, the City has explored possible disposal sites for the future dredge material. A local property owner offered a site on the south bank of the river, upstream of the Corps project reach. On October 31, 2018, a Nationwide Permit 33 application was submitted to the Corps pursuant to 33 CFR 330 to enable constructing a temporary dredge pipeline across wetlands on the disposal site. On January 29, 2019, a meeting was scheduled with representatives from the Corps environmental group where the City was informed that the permit application would need to be revised and re-submitted as an Individual Permit rather than as a Nationwide Permit. One of the major issues was related to the absence of a defined project for which the disposal site is required. As such, the permit application has been revised to an Individual Permit reflecting the project and data from the Tetra Tech work effort previously described. It is anticipated that the permit application will be submitted the week of March 24, 2019.

As previously outlined, this project was first discussed on October 11, 2018 with the intent to extend the Corps' scope of work to include dredging at the mouth bar. Timing has been critical since the City would utilize the same Corps contractor before the Corps project is completed to avoid paying for additional mobilization costs. The total Corps project cost, as bided, is \$69.8 million including \$17.9 million for mobilization. However, an Individual Permit for the disposal site will have a significant delay in processing and thereby impact the timing. A more pressing issue is related to FEMA's determination and confirmation on whether the material proposed to be dredged will qualify as debris removal activity under Category A recovery expense. In the event of an adverse ruling from FEMA, the City would have to cover the entire costs in lieu of the recovery local match of 10%. The next steps for obtaining additional work and expansion of dredging operations along the West Fork of the San Jacinto River include finalizing the analysis for submittal, obtaining the Corps permit, and receiving confirmation from FEMA.

Update as of May 17, 2019

The final TetraTech report was submitted to TDEM and FEMA the first week of April 2019. The report identified the total volume for Hurricane Harvey debris to be between 900,000 and 1.4 million cubic yards, less approximately 112,000 cubic yards associated with the mouth bar. FEMA subsequently forwarded the report to the Corps for evaluation. Utilizing an entirely different methodology, the Corps determined that the debris was approximately 500,000 cubic yards. Based on this assessment, FEMA has advised the City that they are extending the original mission assignment to the Corps to dredge the 500,000 cubic yards. As a result, the City has requested a meeting with TDEM and FEMA to appeal FEMA's decision as to the quantity of debris resulting from Hurricane Harvey and is tentatively scheduled for June 5, 2019.

With respect to disposal, it was determined that the material will be deposited in the originally identified disposal sites that apparently have excess capacity. The City continues to make progress on the Corps application for the disposal site closer to the mouth bar location. An individual permit was submitted for processing; however, when the City was advised that the Corps would be utilizing the existing site for the mission assignment extension, the permit was amended as a nationwide permit once more to be available for the balance of the dredged material.