

Beemer, Jessica - CNL

From: Costello, Stephen - MYR
Sent: Monday, February 11, 2019 4:17 PM
To: nkidd@tamus.edu; Nim.Kidd@dps.texas.gov
Cc: Suzannah.Jones@dps.texas.gov; Sylvester Turner - MYR; Hunter, Marvalette - MYR; Kelly, Bill - MYR; Martin, Dave - CNL; Emo, Tantri - FIN; Rasheed, Arif - FIN; Moreno, Gloria - FIN; Smith, Jamaal - MYR; Patino, Laura - MYR
Subject: TDEM/COH Feb 6 Meeting Follow Up
Attachments: NK Follow-Up 2.11.2019.pdf; Exhibit 1_HMGP Memo.pdf; Exhibit 2_LakeHoustonMethodology.pdf

Chief Kidd,

Thank you for your time last Wednesday, February 6th, 2019. I have attached a letter summarizing our discussion and outlining the path forward. In addition, I have also included the exhibits referenced in the letter. A hard copy of this letter has also been sent to your address.

Thank you,

Stephen C. Costello
Chief Recovery Officer
City of Houston

LAKE HOUSTON DREDGING ANALYSIS WORKPLAN

BACKGROUND

The City of Houston is determining the amount of sediment placed in Lake Houston (Lake) by Hurricane Harvey. Once that volume of material and target areas are determined, the City will work with contractors to remove the storm deposited silt as debris under Category A of the FEMA Public Assistance Program.

Over the last month, the City of Houston has worked with local partners at Texas A&M University - Galveston professors along with the New Jersey Department of Environmental Protection (NJDEP) and Stockton University who managed one of the largest storm-deposited sediment removal operations in history following Superstorm Sandy (Sandy), to refine a methodology that will identify storm deposited silt.

OVERVIEW

The City of Houston will obtain geophysical data illustrating layering of recent sediment, together with ground-truthing vibracores at selected points on the geophysical lines, to delineate the amount of sediment deposited as a result of Hurricane Harvey in 2017 and determine its areal distribution (thickness).

This methodology would allow a reasonable estimate of the number of cubic yards of sediment laid down in this area by Harvey, which would in turn, yield an approximate cost to remove this sediment and return the lake to its prior depth.

This methodology is consistent with the methodologies provided through TAMU-Galveston and the "Stockton Protocol" utilized by NJDEP's in their FEMA-audited and reimbursed program after Sandy.

DATA COLLECTION & ANALYSIS METHODOLOGY

The City will implement a three-phase process to collect and analyze the data.

Phase 1 Sub-Bottom Profile

The City will utilize high frequency "Chirp-type" acoustic sub-bottom profiler data acquisition tool on a survey boat. Each survey boat will include a sub-bottom profiler data acquisition tool, two-man crew and an experienced Marine Geophysicist and Geophysicist for real time Quality Assurance/Quality Control. The resulting data will then be input to Chesapeake Technology's "SonarWhizMap" for processing and interpretation. The team will collect the data along a series of lines across the work area as see in the illustration on the following page.

Phase 2 Data Collection

Following the sub-bottom profile analysis, the City will obtain a series vibracores or push-cores samples located on the same geophysical lines at strategic intervals to ground-truth the geophysical results. The geomorphologists will monitor coring progress/positioning/records and rate of core barrel penetration into sediment.

Phase 3 Sediment Analysis

The City will then utilize Post-Harvey Bathymetric survey data, sub-bottom profile and core samples to determine the areas and estimated volume of Harvey generated silt debris in the Lake for removal.

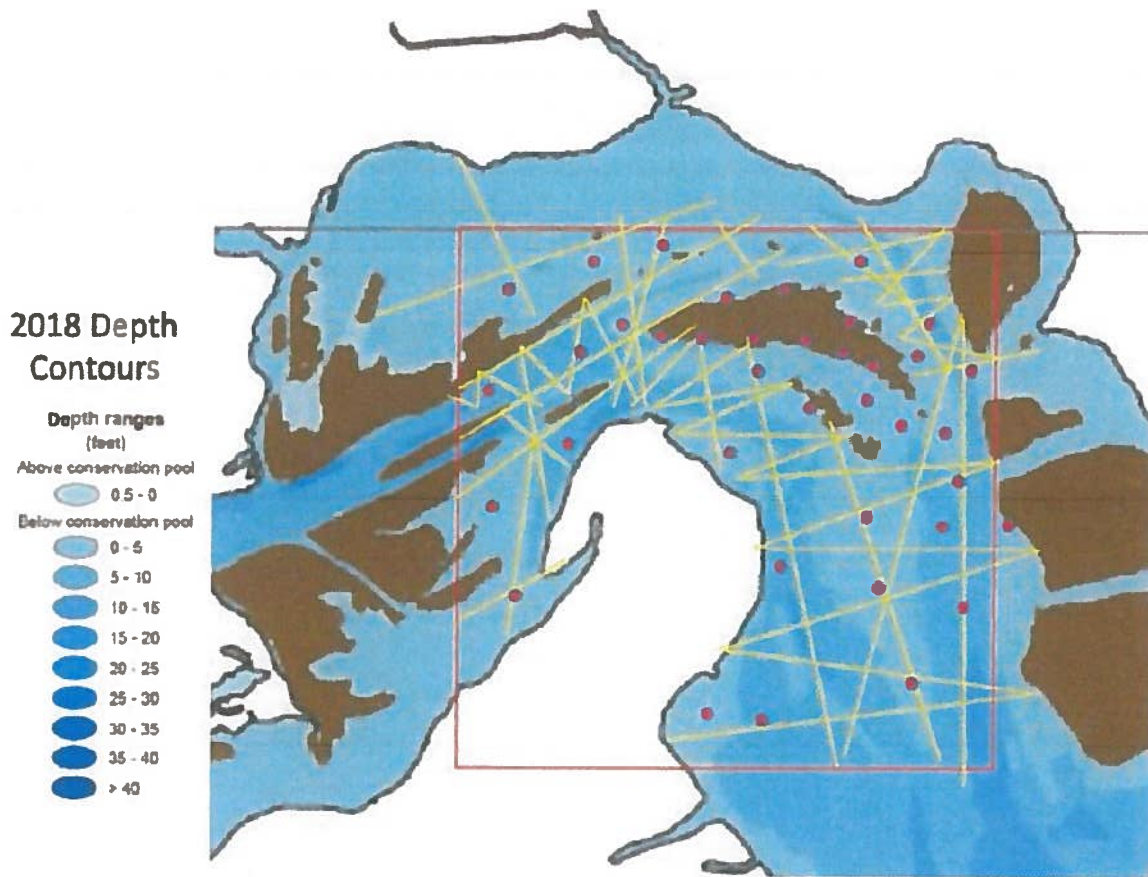


Figure 1. Post Harvey (2018) bathymetry-TWDB showing preliminary proposed seismic track lines (yellow) and proposed core locations. Note: locations of both are likely to change

Cc: Mayor Sylvester Turner
Council Member David Martin
Bill Kelly, Director - Government Affairs, City of Houston
Tantri Emo, Director - Finance, City of Houston
Arif Rasheed, Deputy Director - Finance, City of Houston