Luis Partida, BS
Research Scientist
The Water Institute
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EDUCATION

University of Arizona	Tucson, AZ	Civil Engineering	BS, 2013
Mohave Community College	Colorado City, AZ	Liberal Arts	ALA, 2010

RESEARCH INTERESTS

Hydrologic and hydraulic modeling, HEC-RAS, project management, model development.

PROFESSIONAL EXPERIENCE

The Water Institute	Research Scientist – Numerical Modeling	2022–Present
RPS	Senior Water Resources Engineer	2020–2022
AIA, Inc/CONSOR	Senior Water Resources Engineer	2018–2020
OMEGA Engineers, Inc	Water Resources Engineer	2014–2018
Walter P. Moore	Graduate Engineer	2014

PROFESSIONAL SOCIETY MEMBERSHIPS

- E.I.T. registered in Texas, 2017
- E.I.T. registered in California, 2013

TEACHING EXPERIENCE

University of Arizona – AutoCAD Civil 3D 2012–2013

Independent Author of 2 Dimensional Modeling in HEC-RAS 2 day workshop 2016–2022

NOTABLE PROJECTS

Research Scientist/Louisiana Barrier Island System Management: Structured Decision Making 2019–2020

Coastal Protection and Restoration Authority

Developing a conceptual framework for regional sediment management (RSM) in barrier island restoration, including inventorying available data for model development and identifying potential stake holder concerns.

Research Scientist/FM 2100 Drainage Analysis Houston, TX 2019–2020

TxDOT

FM 2100 is a roadway located within the Luce Bayou Watershed. The proposed roadway was to be widened requiring cut within the 500-yr floodplain. I analyzed the existing and proposed drainage network utilizing XPSWMM. The existing ditch network was to be changed to a closed conduit storm sewer network with 7 detention ponds requiring a no-impact result. The proposed network contains more than a hundred nodes and links. Once completed, I wrote the drainage report and created exhibits for the final submittal that was submitted to TxDOT.

Research Scientist/Aberdeen Green Drainage Analysis, Houston, TX 2019–2020

Harris County Engineering Department

Aberdeen Green is a subdivision located in north Houston that sustained damages during Hurricane Harvey. Utilizing a 1D/2D XPSWMM hydraulic model and Atlas-14 rainfall data, I modeled existing conditions in order to determine the cause of flooding. The dynamic model allowed myself to determine the source of flooding, the time at which it occurred and to calibrate the model to a real time event. Proposed alternatives were modeled and presented to HCED. After the proposed solution was agreed upon based on its feasibility, the final product was presented to the Public including a power point presentation followed by an open forum question and answer session.

Research Scientist/Meadow Hill Drainage Analysis, Houston, TX 2019–2020

Harris County Engineering Department

Meadow Hill is a subdivision located in north Houston that sustained damages during Hurricane Harvey. Nearly 100 properties sustained damage. Utilizing a 1D/2D XPSWMM hydraulic model and Atlas-14 rainfall data, I modeled existing conditions in order to determine the cause of flooding. The dynamic model provided the opportunity to determine the source of flooding, the time at which it occurred and to calibrate the model to a real time event. Proposed alternatives were modeled and presented to HCED. After the proposed solution was agreed upon based on its feasibility, the final product was presented to the public including a power point presentation followed by an open forum question and answer session.

Research Scientist/Parkway Mobile Homes Drainage Analysis, Houston, TX 2019–2020
Harris County Engineering Department
Parkway Mobile Homes is a subdivision located in north Houston that sustained damages during Hurricane Harvey. Over 300 properties sustained damage. This project was unique in that it was adjacent to the Greens Bayou. The proposed solution to flooding was to utilize Atlas-14 rainfall data with the assumption that if the Greens Bayou was not allowing runoff to outfall. Utilizing a 1D/2D XPSWMM hydraulic model, I modeled existing conditions to determine the cause of flooding. The dynamic model allowed for the opportunity to determine the source of flooding, the time at which it occurred, and to calibrate the model to a real time event. Proposed alternatives were modeled and presented to HCED. After the proposed solution was agreed upon based on its feasibility, the final product was presented to the Public including a power point presentation followed by an open forum question and answer session.