

Tutorial Overview

Road Elevation Model

Basics of Road Elevation Model

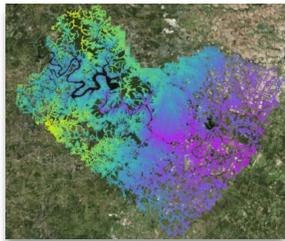
A Road Elevation Model is a dataset of points that define the surface elevation of a road network. This dataset can be used to calculate the depth of the roadway flooding according to the equation:

$$\text{Road Water Depth} = \text{Water Surface Elevation} - \text{Road Surface Elevation}$$

Tutorial 1 / Building a Road Elevation Model of the Shoal Creek Watershed

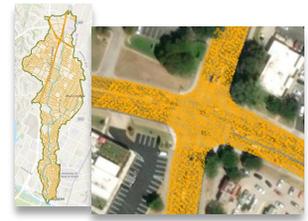
The detailed tutorial can be found here: [Tutorial1.pdf](#)

Starts with....



Road Elevation Model of Travis County (690 million points)

Ends with....

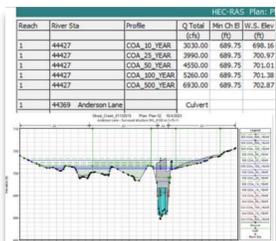


Road Surface Elevation of the Shoal Creek Watershed (24 million points)

Tutorial 2 / Flood Inundation Map for Anderson Lane at Shoal Creek

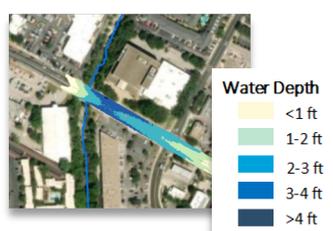
The detailed tutorial can be found here: [Tutorial2.pdf](#)

Starts with....



HEC-RAS Model Cross-Section of Shoal Creek at Anderson Lane

Ends with....



Water Depth for 100-year Flood on Anderson Lane at Shoal Creek

Tutorial 3 / Impact on Roads of a 100-Year Flood on Shoal Creek

The detailed tutorial can be found here: [Tutorial3.pdf](#)

Starts with....



100-year Water Surface Elevation grid from HEC-RAS model

Ends with....

Street Name	Segments	Length (ft)	F_System
ANDERSON LN	1	725	4
N LAMAR BLVD	12	6586	4
W 38TH ST	1	152	4
W 5TH ST	1	1111	4
W 6TH ST	3	1016	4
W MLK BLVD	2	202	4
GREENLAWN PKWY	4	808	5
HANCOCK DR	1	351	5
SHOAL CREEK BLVD	29	6942	5
STECK AVE	7	497	5

Inventory of flooded road lengths indexed by Functional Classification (F_System) in the TxDOT Roadway Inventory