

IGME 689 Fall 2025 – Assignment 2

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September 19, 2025

1 Github Repository for Assignment

2 Dataset

The dataset that I chose is a simple flood model that I created for Oatka Creek in Wheatland, NY and surrounding watersheds using Arc Hydro and SRTM data. The data is symbolized by the depth of water. The current data is just showing a single flood stage, but I have multiple stages processed and can create more to improve the simulation of the water change over time. The data is published on my ArcGIS Online account and can be accessed from here.

I tried a few different building layers and found the open layers were the most consistent ones to display the data. Also, I only did one model in this view because to do the tiles on multiple took longer to upload and generate. Also in the scene I have a 3 meter inundation contour.

I think this might be usable to create the water features like we did the racetrack in class on Wednesday. NYS GIS Clearinghouse has a road feature class that can be used for the road network. Other data that I have not figured out how to use is the Critical Infrastructure points. I have this data for all of NYS based on data from <https://data.ny.gov> or <https://data.gis.ny.gov/>. A sample of this can be seen from this webmap (clipped to a different area) WebMap Viewer.

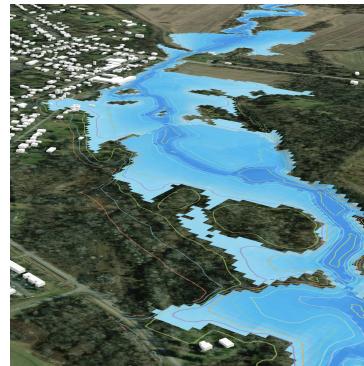


Figure 1: View of the data using the ArcGIS Online Scene Viewer

3 Controls

The controls of my simulation are a simple left and right map jump to show the locations as well as mouse controls to fly around the scene. The Opening Scene is the village of Scottsville. **Scene 1** is the Sabin Metal Works, this facility right on the creek has had a number of fire or ambulance calls due to the type of work. **Scene 2** is the Scottsville fire department where our responders would be dispatched from. **Scene 3** is the Caledonia Fish Hatchery, which is the oldest in the country.

4 Gamification

Much of my research is around the use of technology to inform the public. In this we use a design fiction approach to set a narrative and learn about how people use a technology for emergency response. Often we use a tabletop approach where response is discussed from a high level. However in this environment we could actually have the responders and emergency managers drive around like they would in a real response encountering the challenges brought by the storm. There could be set rescue points to get to.

There was a similar game called project Lily Pad a few years ago from researchers at RIT, which focused on flooded neighborhoods. While a catastrophic event that requires water travel is a possibility, in this region it is more common to have water be a barrier to land travel. So in the game it would be to find the most efficient way to the rescue points, while avoiding the flooded areas.