Regional Flood Inundation Modelling & Planning Center

Alexander Nelms – CPLN 675 – Homework 2

A Regional Flood Inundation Modelling and Planning Center would spatially predict regional flooding and aid in the policy process to mitigate damages. Flood inundation modeling, specifically, uses statistical models to predict which areas would suffer from flooding, the size of the flood, and the timing.

All governments would find value in understanding their area’s vulnerability to flooding. The issue is that watersheds & general physical geography don’t reflect local government’s borders. Flood inundation modeling & planning centers would be the most effective if they could model, plan, & govern over a regional area – at a level similar to public utility districts. Regional governance is the best fit as it can understand the full watershed of multiple counties & cities but it is small enough to uniquely communicate information to local safety planners & policymakers. Importantly, the regional scale would allow modelers to realistically & accurately collect, model, & test data.

Flood inundation modeling has a similar process across many regions but each region has unique variables that need to be accounted for. To clarify the basics, flood inundation modeling builds flooding scenarios based on the focus area’s topography, watersheds, and historical flooding events. Creating a dedicated center would allow multiple, specialized staff members to collect data, engineer models, and interpret the regional results. A regional center would need a team of data collectors & modelers to understand & reflect the local scenarios. That same center would also need planners & policy makers who can interpret those results, develop mitigation policies, then advocate to local governments to act on their recommendations. Ideally, the center & local policy makers would eventually create flood infrastructure and programs that mitigate flooding in the predicted flooding areas.

The ultimate question is if these regional flood inundation modeling & planning centers could feasibly be political maintained. The benefits of these centers should be enough to warrant their creation. But the reality is that regional agencies (without lawmaking powers) are the ‘no man’s land’ of the U.S. federalist structure. Like a middle child, they are ignored by the busy federal (parental) & state (older child) governments but do not have the power to force local governments to create policy or budgets.