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In the aftermath of large natural disasters, many affected individuals and households rely on public funding for housing recovery. Federal Emergency Management Agency's (FEMA) Individual Assistance (IA) is one such critical program. The IA sub-program, Individual and Households Program (IHP), provides repair, replacement, rental, and other needs assistance for eligible owner- and renter-occupied households. Through the OpenFEMA data sharing program, FEMA has made various IHP datasets publicly available. In this poster, we describe research examining all IHP funding for 2017 Hurricane Harvey in Texas. Specifically, we use the OpenFEMA Individual and Households Program—Large Disasters dataset which provides micro-level household-applicant data, spatially identifiable to the Census block. We also integrate data from a variety of sources to identify hazard exposure and physical and social vulnerabilities including disaster declared areas, flood inundation, wind swaths, storm track, and demographic and socioeconomic data. We develop a series of models—both Census Tract aggregated and at the applicant-level—to capture the process through hazard exposure, hazard impacts, application for assistance, damage inspection, eligibility determination, and funding allocation. Findings from this analysis will (a) help to identify any procedural inequities in the application process, (b) inform specifications of future models including more events represented in OpenFEMA data, and (c) be integrated into a community resilience assessment and planning computational environment.