Nashville Floods: Automated Building Permits

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SUMMARY
In the aftermath of the 2010 Nashville floods, requests for rebuilding permits overwhelmed the city’s Department of Codes and Building Safety. The Department repurposed an existing permitting system to expedite applicant requests, allowing the Department to focus on more severe cases.

DESCRIPTION
On May 1-2, 2010, the Cumberland River basin experienced a 1,000-year rainfall that resulted in a flood in excess of a 500-year event, inundating the Nashville Metropolitan area. The flooding damaged approximately 12,000 homes and claimed 11 lives. After the storm, an initial 9,000 requests for rebuilding permits overwhelmed the Nashville Department of Codes and Building Safety. To cope with the surge in requests, the Department repurposed its ePermitting system for use by residential flood victims. This allowed individuals with minimally damaged homes to skip the lengthy in-person application process and self-issue their permits online.

Implementing the Automated Building Permits System for Residential Use
Members of the whole community, including the Department of Codes and Building Safety, the Assessor’s Office, Planning Department, and the Fire Department worked closely throughout the initial response to carry out damage assessments on every parcel of land in Metropolitan Nashville. Forty two-person teams completed this damage assessment in three and a half days. Those teams then analyzed the damage assessment information and GIS floodplain data to identify the most impacted areas. Using these results, and a damage assessment matrix that ranked flood damage levels, the Department determined which homeowners would be able to apply online for an automated, self-issued rebuilding permit. Those residences not located in the 100-year floodplain, or those located in the 100-year floodplain but with a low score on the matrix, qualified for the self-issue permit. This method of classification meant that 5,000 flood-damaged homeowners became eligible for online permitting.
Results and Significance
Eventually, roughly 25 percent of the total applicants applying for rebuilding or repair permits made use of the online self-permitting system. This assisted rebuilding efforts in several ways, including:

- Allowing homeowners to avoid applying in-person at the Department or at one of the mobile stations;
- Freeing up Department personnel to work on more severe cases;
- Establishing a tiered approach that quickly directed survivors toward self-permitting as appropriate;
- Allowing mobile home owners to use this type of permit for the first time; and
- Reducing the overall burden on the Department.

REFERENCES


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