Alaska NSF EPSCoR and the Geographic Information Network of Alaska (GINA) recently offered Alaskans the chance to help Puerto Rico’s recovery efforts using nothing but their laptops.

In late September 2017, the two groups organized a three-day “Mapathon” event, in which individual volunteers gathered in the Decision Theater North visualization space to electronically map previously uncharted areas of Puerto Rico to aid emergency personnel responding to the aftermath of Hurricane Maria.

“After the hurricane, we were thinking, well, what can we do to help and lend support, and we thought, ‘Well, we’re good at making maps,’” said Tania Clucas, EPSCoR’s Education, Outreach and Diversity Manager. The volunteers identified and labeled features using web-based geospatial tools, selecting their tasks from a list maintained by the group Humanitarian OpenStreetMaps. Clucas said this was an easy way for Alaskans to help from afar.

“We’re off on this side of the continent and they’re over there, but we still wanted to help,” Clucas said. “And we’ve done some Mapathons before, and they needed maps. It’s pretty easy for us to open up the space and work remotely and provide support from a distance.”

The Puerto Rico Mapathon was one of four such events put on by EPSCoR and GINA this year. In the first, 12 people mapped areas of Delta Junction, while a June event focused on North Slope communities. In addition to September’s Mapathon, which drew 24 volunteers, an October event also focused on Puerto Rico.

OpenStreetMaps works similarly to Google Maps in the sense that it provides satellite images of areas of land to illustrate infrastructure and natural elements. But much of the satellite imagery of Puerto Rico has not been mapped, which keeps emergency personnel on the ground from being able to identify what used to be in a place before it was destroyed.

According to Clucas, the Red Cross has been asking people to mark buildings, roads and other structures in OpenStreetMaps to help emergency personnel in Puerto Rico see where structures might have been prior to the hurricane. This helps workers to locate damaged gas lines, electrical lines and people who may be lost or trapped.

“There are not accurate, current, electronic maps for the emergency response groups,” Clucas said. “If you have people who are coming in and trying to deal with getting the power back up for example, these people need to know where buildings were.”

At the September event, volunteer efforts were displayed on a series of large screens in Decision Theater North. One screen showed a large map of all of Puerto Rico. On the adjacent screen, a section of the map was peppered with green, orange and white boxes. Green meant the area had been mapped and validated, orange meant it had been mapped but was awaiting validation, and boxes in white were areas that needed to be mapped, said GINA project manager Vanessa Raymond.

“They’ve divided up the area in question,” Raymond said. “So just a few days ago, when we first started the Mapathon, we were working on that area right around that dam that was about to go.”

Humanitarian OpenStreetMaps provides directions for users on how to outline buildings and identify structures and provides maps at varying levels of difficulty so everyone can help as they are able. “It gives them a tool to use where they didn’t have anything before,” Clucas said.

Raymond said it was the ideal way for the university to lend assistance. “It’s the perfect blend of helping in something that really needs to be done, it uses our expertise, and we can train students or other people to learn new skills,” Raymond said. “So for a university to be able to contribute to the common good and also be doing something educational I feel like is great.”