

**Call for Applicants: Full Stack Software Development
Smart Cities Testbed - New York State Empire State Development**
(Deadline for submission is 9/1/2020 at 5 PM ET)

floodNet: Real-Time Flood Monitoring Network in NYC

FloodSense (NYU) + FloodWatch (SRIJB) = floodNet



The floodNet Real-Time Flood Monitoring Project is a Smart Cities initiative focused on developing and deploying a sensor network for the monitoring, analysis and understanding of street-level, urban flooding. With the sensor development already underway, **this solicitation is for full stack software developers to assemble an online database and dashboard for residents and researchers to access collected flood data, increase understanding of flood events, protect local communities, and improve resiliency.**

Development is in collaboration with the Mayor's Office of Resiliency, the Mayor's Office of the CTO, community partners in Hamilton Beach, Rockaway, Gowanus, and academic partners at City University of New York and New York University Tandon School of Engineering.

In New York City, sea level rise and high intensity rain storms have led to a dramatic increase in flood risk, particularly in low-lying and coastal neighborhoods. Urban flood water can damage property, impede pedestrian and vehicle mobility, and can contain contaminants, such as fuels, sewage, and industrial/household chemicals.

The goal of floodNet is to develop and deploy a fleet of connected flood sensors in neighborhoods around the Gowanus Canal and Jamaica Bay watershed, and to log, process, and present data on hyper-local street floods. The long term goal is to combine this data with other information streams - rainfall levels, 311 flooding complaints, social media feeds - and make it publicly available to serve community needs through dedicated web portals, social media or custom apps.

The successful applicant will work closely with the sensor hardware team who are already in place, and will be responsible for the delivery of the online data platform that makes the sensor data available to a

range of stakeholders. We require the design and implementation of a full stack system from data ingestion and storage through to public dissemination via front end data portals.

- Expertise in iterative, participatory design
- UX skills (interactive data visualization)
- Full stack development experience
- Company diversity
- Devops
- Experience with open source projects

Our vision is that the data platform and visualization are co-designed with community members, prioritizing their interests and needs. Emphasis is to be on a robust and resilient open-source platform that can be incorporated by the participating groups into their technology knowledge (tech transfer) and that can withstand the vicissitudes of public and academic funding. We are looking for a team who is passionate about community engaged projects, and whose core values include participatory design and iterative processes. This project is a consortium of academic research groups, city agencies, and community organizations who are organizing to address a problem that affects the more vulnerable communities in our city.

Funds for this project are provided by New York State Empire State Development through the [Smart Cities Innovation Partnership](#) and asks for a contribution from the applicant either through in-kind services or cash match. The program offers the applicant an opportunity to partner with local governments across New York State to validate and deploy emerging technologies for public good. Beyond project support and funding, validation in New York State enables small startups and large incumbents alike to demonstrate credibility in the fast-growing urban technology and smart cities industry space. Companies submitting proposals are required to have a presence in New York state, either presently or in the future if selected.

Applications can be submitted here: <https://esd.ny.gov/new-york-smart-cities-innovation-partnership>
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Further information:

- Announcement of [NYS EDS Real-Time Flood Monitoring award](#)
- NYU Urban Flooding Group: <https://wp.nyu.edu/urbanflooding/flood-sense/>
- Science and Resiliency Center at Jamaica Bay (SRIJB): <https://www.srijb.org/>
- SRIJB Floodwatch: <https://www.srijb.org/jbfloodwatch/>

For more information please reach out to Charlie Mydlarz (cmydlarz@nyu.edu), Ricardo Toledo-Crow (rtoledocrow@gc.cuny.edu), and Paul Rothman (prothman@cto.nyc.gov).

*NYU Tandon FloodSense is supported by the [NYU C²Smart Transportation Research Center](#).
FloodWatch is a partnership between SRIJB/CUNY and [NY Sea Grant](#)*