



DEPARTMENT OF
**ENVIRONMENTAL
PROTECTION**

Montgomery County Flood Sensors



A Partnership among the Department of Homeland Security (DHS) and the Department of Environmental Protection (DEP), Office of Emergency Management and Homeland Security (OEMHS), Department of Transportation (DOT), Fire and Rescue (MCFRS), and the Maryland National Capital Park and Planning Commission (M-NCPPC). These entities all have various public safety roles in responding to flood monitoring during storm events.

What is the Flood Sensor Project?

The Flood Sensor Partnership is a cooperative effort among County agencies responsible for various aspects of Public Safety, Storm Event Preparedness and Response, and Emergency Management, along with the federal Department of Homeland Security (DHS) to install 34 next generation IoT flood sensors in flood-prone areas of the County. The flood sensors are manufactured by Intellisense, and detect rising flood water levels during storm events to send early flood warnings to officials based on real-time monitoring

Background

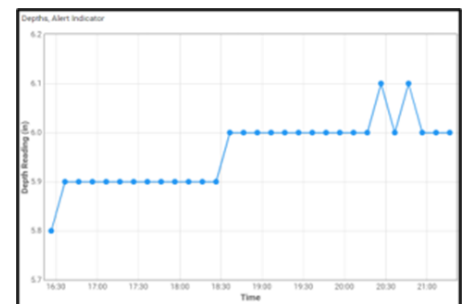
The Flood Sensors deployed in the County through this project have been developed by the [DHS Science and Technology Directorate](#) with scientists, equipment manufacturers, and stormwater management programs around the US to develop scalable, low-cost flood-sensor networks in response to changing climate conditions that are resulting in more frequent and higher intensity storm events. Urban and riverine flooding is a growing issue in Maryland. The increasing number of extreme rainfall events that produce intense precipitation will continue to lead to more urban and riverine flooding events, with increasing demands on public safety programs to mitigate their impacts. The 2017 National Climate Assessment indicates that “heavy downpours are increasing nationally, especially over the last three to five decades. The largest increases are in the Midwest and Northeast, including the Mid-Atlantic.

The flood sensors are low-maintenance and DHS is providing all 34 flood sensors at no cost to the County under a Cooperative Research and Development Agreement (CRADA). The County is responsible for installation and maintenance of the sensors, analyzing data accuracy, and piloting local usage such as long-term operations and procedures.



What do the Flood Sensors Do?

The flood sensors automatically detect rising water levels and focus specifically on providing early warnings about high water levels or flooding. They will promote community resilience and prepare communities to respond by providing alerts, warnings, and notifications of flooding, protecting critical infrastructure, and reducing property losses.



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Where Are the Flood Sensors Deployed?

The flood sensors are deployed starting June 2022 at 34 sites identified by DEP and OEMHS, including 14 high or significant hazard dams and 20 low-lying roads and flood-prone areas. These real-time sensors complement and extend the capabilities of the County's existing operations that include DEPs remote monitoring stations that are part of existing Dam Safety Operations, and OEMHSs tracking and monitoring of water levels at streams and rivers across the County through the existing US Geological Survey (USGS) gauges.

For More Information

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Enhancing Storm Event Preparedness and Public Safety



Long term real-time water level monitoring at the County's dam sites will help identify potential clogging and other issues to assist preventive maintenance.