

# DHS Science and Technology Directorate

## National Resilience Standards for Flood Proofing Products Project

### Developing New Standards for Existing Flood Mitigation Products

Each year, floods cause \$7.9 billion in damage. As that number continues to rise at an annual rate of about two percent per year, so does the demand for reliable flood mitigation solutions, such as temporary flood barriers, closure devices, backwater valves and mitigation pumps. There are hundreds of flood resilient products available on the market, but manufacturers and the public need a way to know whether these products are reliable.

The Department of Homeland Security Science and Technology Directorate (S&T) First Responders Group recognizes this critical need as an opportunity to develop new standards to test and certify additional product categories for semi-permanent flood barriers and seal-ants, as well as S&T funded low cost flood sensors.



Photo Credit: Town of Cary, North Carolina.

To develop the new standards, S&T is partnering with the Association of State Floodplain Managers (ASFPM) to expand the National Flood Barrier Testing and Certification Program (NFBTCP) to include standards and testing for the new flood proofing product categories. NFBTCP is an existing program that provides an unbiased product evaluation for resistance to water forces, material properties and consistency of product manufacturing. S&T's National Resilience Standards for Flood Proofing Barrier Products Project will: Develop testing standards and protocols for sealants and semi-permanent barriers; Develop testing standards and protocols for flood sensors; and Work

towards getting NFBTCP standards and certifications accepted into national construction and building standards.



The FM Approved and Platinum Certified Flood Plank

S&T's partnership with ASFPM, includes coordination with loss prevention product-testing company FM Approvals and the U.S. Army Corps of Engineers (USACE)—to provide subject matter expertise on flood proofing testing and assessment processes, while guiding the program's key contributors on how to develop testing standards and protocols for additional flood mitigation tools.

Based on the current certification process, the manufacturers will apply to schedule testing and certification through NFBTCP. Once testing is completed successfully using national flood proofing standards, a report will be prepared and reviewed for technical accuracy and quality. The testing entity will send the final report to the manufacturer.

By teaming up with ASFPM, USACE and FM Approvals, S&T can pair engineers, scientists and researchers with industry and academic partners to ensure R&D investments address the high-priority flood prevention needs of today and the future, ensure product quality, and stimulate manufacturing design and performance.

### Upcoming Milestones

The project team will develop draft standards by mid-2018. The draft standards are expected to be finalized by the end of 2018.