

WASTOP PROTECTS HISTORIC CITY OF ST AUGUSTINE

Location: Saint Augustine, Florida
Customer: City of Saint Augustine

PROBLEM:

Saint Augustine is known for its beautiful historic downtown, its waterfront areas, Vilano and St. Augustine Beaches and it is a popular tourist city. St Augustine is coastal and therefore subject to frequent flooding and is vulnerable to storm surge, nuisance flooding and sea level rise. Flooded streets were commonplace and storm surges rendered some roads impassable. Extensive costs were associated with road repairs and flood clean-up. During Hurricane Matthew, Davis Shores, a residential area suffered extensive damage with a large number of homes sending FEMA claims.

Red dots showing FEMA claims following Hurricane Matthew.



Red dots showing FEMA claims following Hurricane Matthew



Stormwater Outfall pipe submerged during high tide



Same stormwater outfall pipe exposed during low tide

SOLUTION:

Saint Augustine participated in a community resilience initiative with the Florida Department of Economic Opportunity to complete a coastal vulnerability plan and an adaptation plan.

One of the projects that came out of the resilience initiative was to undertake a Davis Shores Tide Check Valve Program as a Flood Mitigation Project. 21 outfalls were identified as potential problem areas. The City's stormwater system is a gravity system through the underground pipe network with outfalls into the Matanzas Inlet or Salt Run. During low tide this system works well, however at high tides salt water can back-up into the pipe network and cause street flooding.

The most vulnerable outfalls were to be fitted with inline check valves and WaStopwas chosen for a

number of these outfall in order to stop the salt water backflow. In some cases, the valves replaced damaged flap valves and duck bills, and in other installations there was previously no valve in place.

Installations needed to be quick and easy given many of the installation were in tidal areas.

Immediately after installation the flooding was completely mitigated. The streets are now dry, and work can be done on repairing the roads and other infrastructure now that there is peace of mind knowing that nuisance flooding won't occur again.

WaStop is quick and easy to install allowing most City's to do the installation themselves.

Saint Augustine used their own maintenance team for installation saving considerable monetary resources by not needing to use an external contractor. Comparatively Saint Augustine lowered the total cost (product + installation) by 64% through using in-house maintenance workers compared to using an external contractor.

There are a further 9 projects underway in Saint Augustine to protect the City and its heritage against flooding.

Thanks to Jessica Beach for the information and images. www.citystaug.com