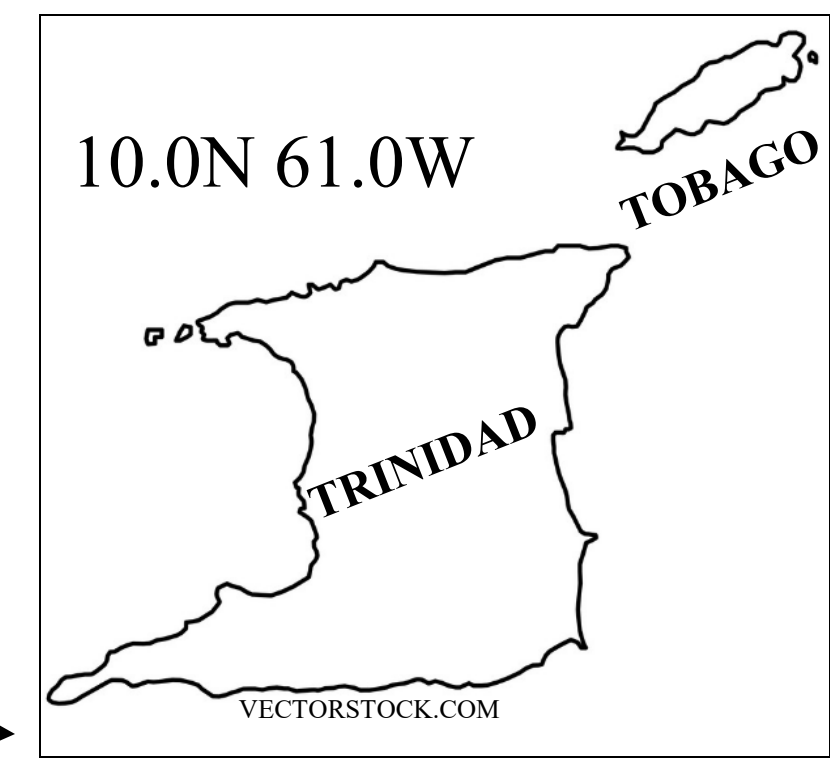


THE EVENT

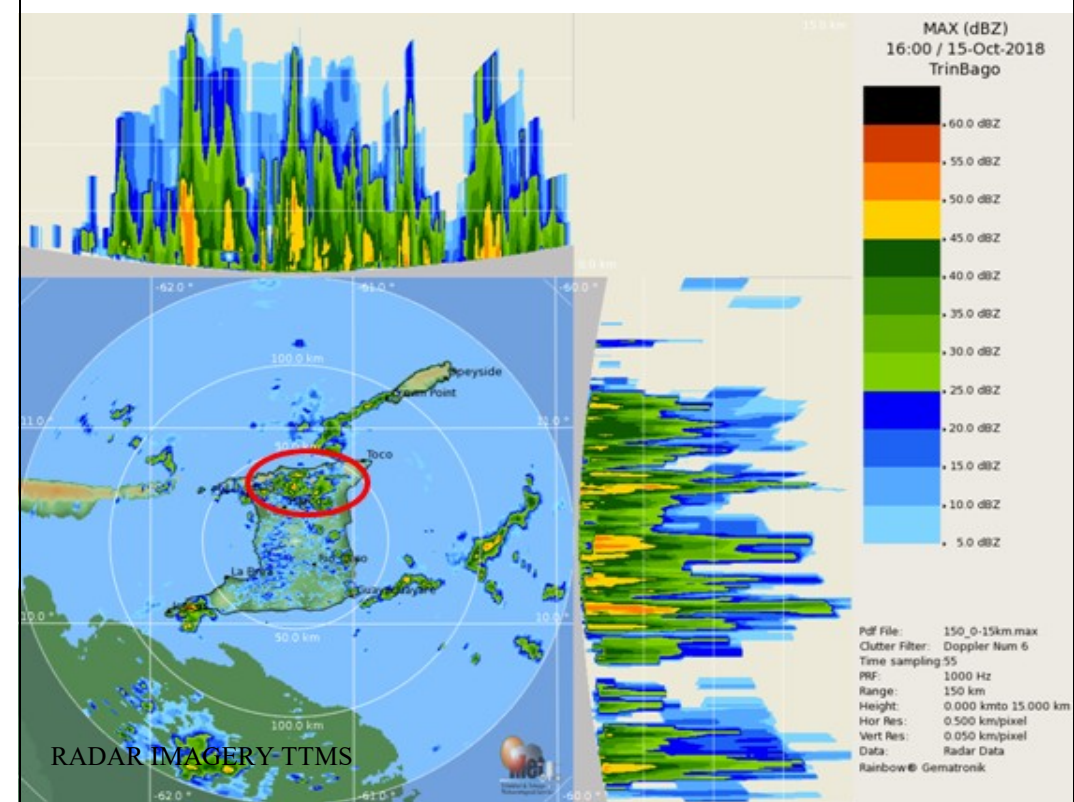
A non tropical-cyclone, rainfall event 17th to 19th October 2018 led to a National flood disaster up until the 25th October 2018 in Trinidad and Tobago. Main precipitation and enhancement features were the ITCZ, low level troughs, upper level divergence, warm SSTs and a propagating Kelvin wave which were all tied to a deep moisture profile. The intense rainfall led to widespread flooding which impacted almost 80% of the country. An estimated 100,000 to 150,000 people across the country were directly affected with Greenvale community being hardest hit. There was widespread property damage in addition to crop annihilation, mass evacuation and/or displacement and active emergency shelter operations.

TRINIDAD & TOBAGO



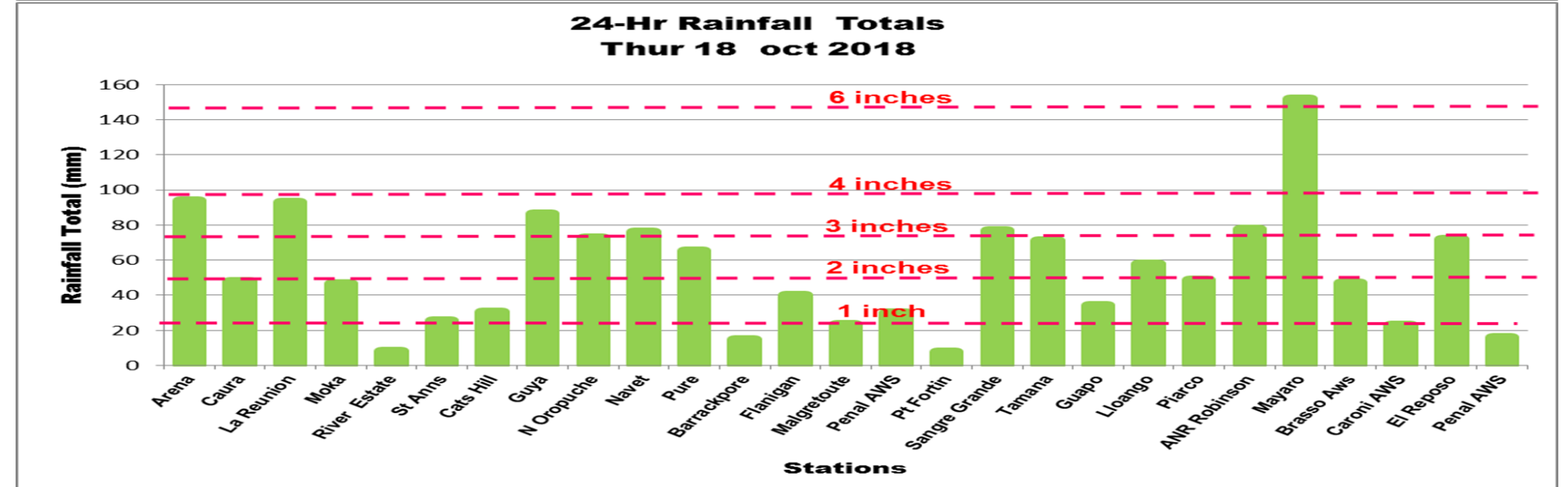
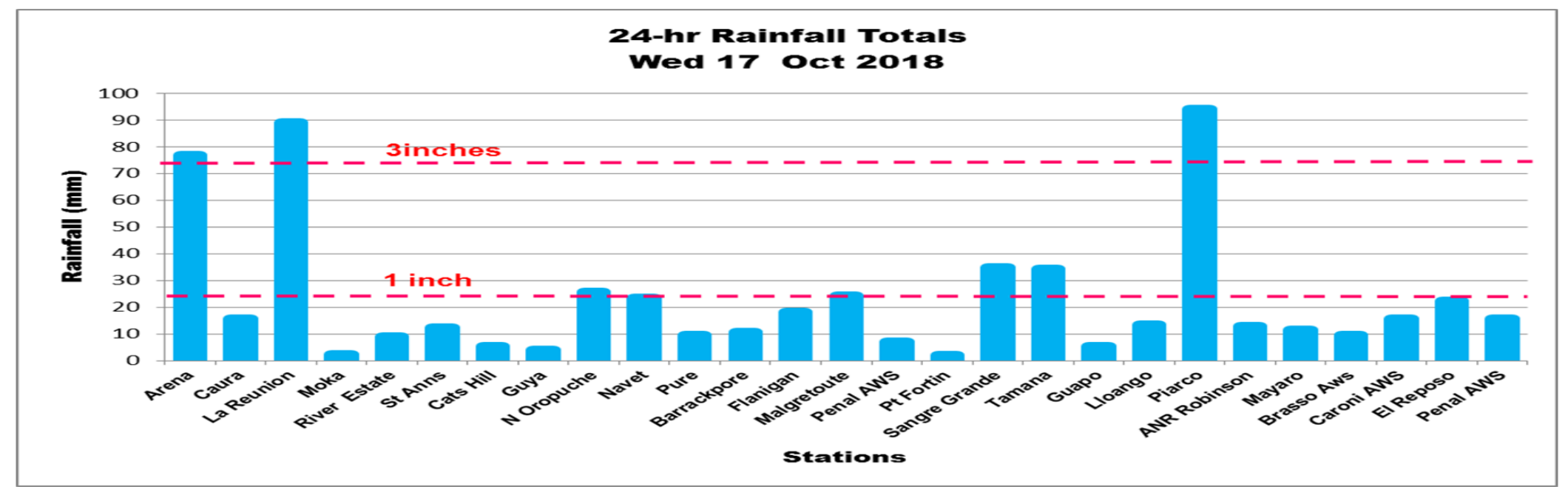
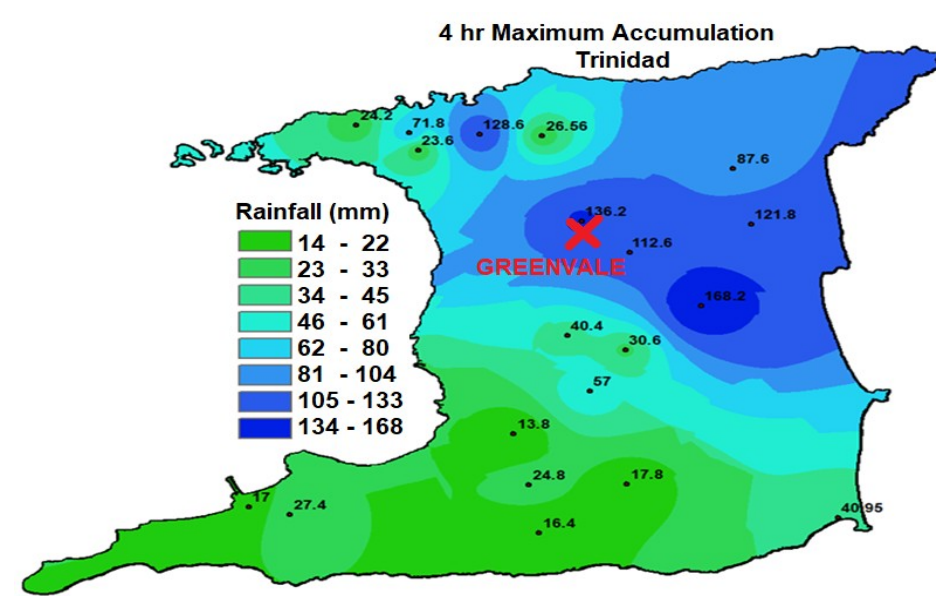
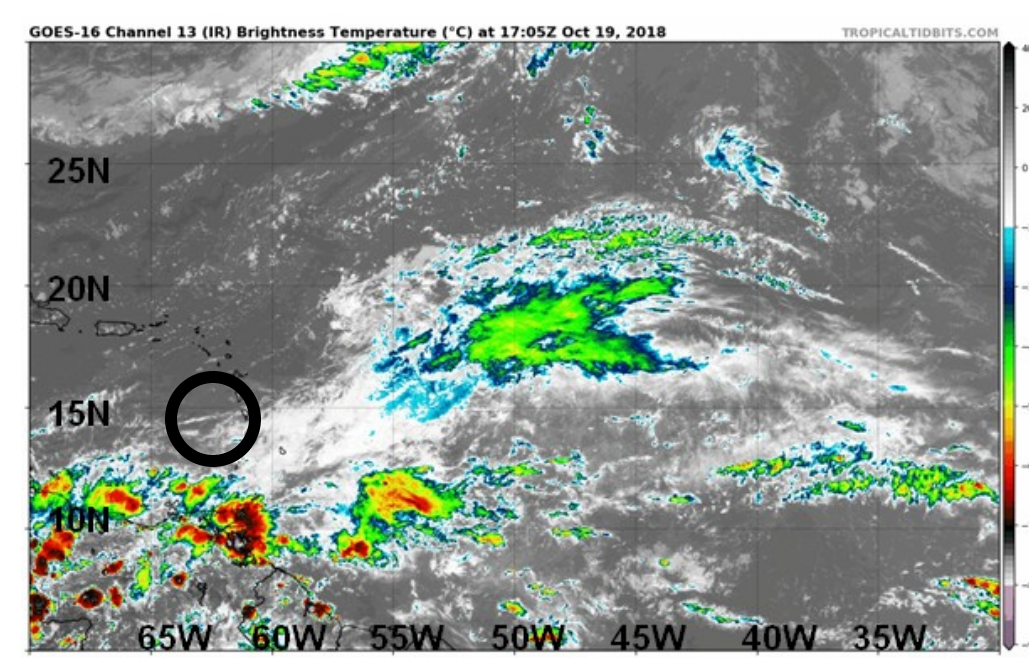
PRE-EVENT

A weak Tropical Wave produced rainfall on the 15th and 16th October which began the process of saturating and reducing the holding capacity of the northern watersheds.



TORRENTIAL PRECIPITATION EVENT 17th –19th

A well established ITCZ ideally located mainly over north Trinidad pulsed at times by low level troughs. Deep convection and significant groundwater accumulation led to widespread and riverine flooding which lasted in some areas until the 25th October, with lingering ponding in some areas. Accumulated rainfall over the event was 9.86 inches (250.2 mm). The average (1981-2010) rainfall average for October is 8.15 inches (206.9 mm). This event was forecast by the TTMS since the 14th October 2018.



IMPACTS

Evacuation by boat



Sandbags ineffective



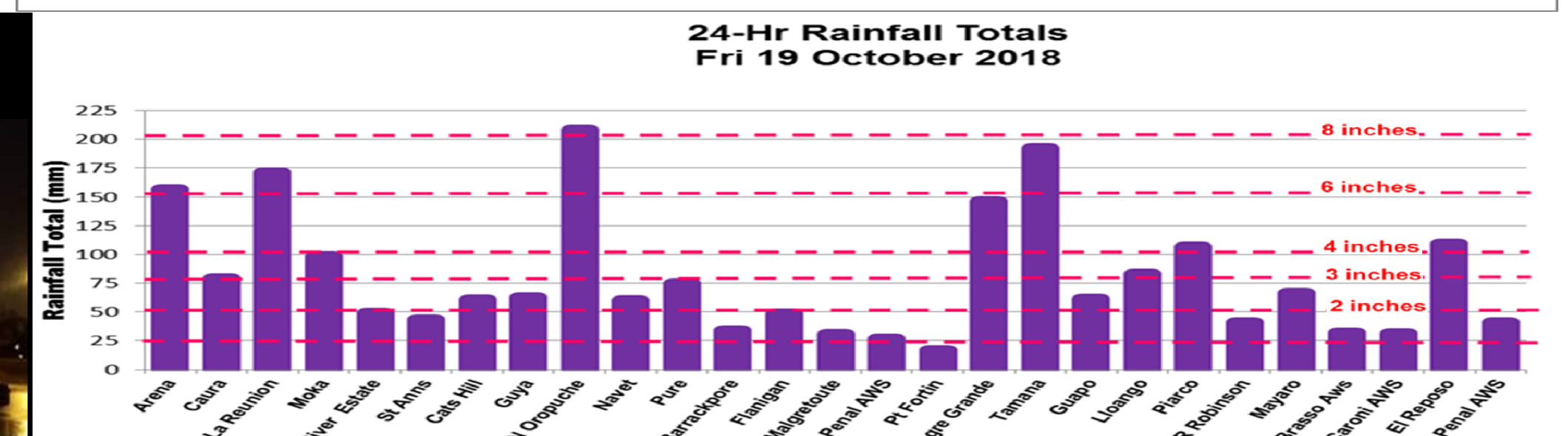
...and roads were rivers



Greenvale Park inundated



Restricted highway access



CONCLUSION

The 2018 October 17th—19th rainfall event provided Trinidad and Tobago with unprecedented and widespread flooding impacts, the worst ever seen from a non Tropical - Cyclone. Rainfall over three days exceeded the climatological average for October for a thirty year period. The precipitation setup was a near perfect combination of the ITCZ, a very high-moisture envelope, low level troughs, upper level support, warm seas, light winds and a Kelvin wave in the area. Even with advance warning of the impending weather, thousands were displaced and even more directly affected. The *Greenvale flood 2018* event provided lessons well learnt.