



10/10/2025 to 10/10/2025

**Excess Rainfall
Wind and Storm Surge**

Final Event Briefing

Montserrat Utilities Limited

19 October 2025

1 SUMMARY

Tropical Cyclone Jerry was the tenth named storm of the 2025 Atlantic Hurricane Season. On 10 October 2025, TC Jerry moved across the Atlantic waters' northeast of the Leeward Islands, passing at a distance of approximately 86 mi (139 km) from Montserrat. Despite its proximity to the storm's centre, Montserrat did not experience tropical-storm-force winds, due to the storm's sheared structure, which confined the strongest winds to the northeastern semicircle of the system. However, Montserrat was affected by heavy rainfall associated with the storm's convective core, particularly between 0600 UTC and 1400 UTC on 10 October.

The runs of the CCRIF CWUIC model have produced losses greater than zero for Montserrat Utilities Limited (MUL) under its CWUIC policy due to Tropical Cyclone Jerry. The losses for MUL are below the Attachment Point of its CWUIC policy and therefore Jerry is designated as a Loss Event for Montserrat. Therefore, no payout is due under the utility's policy.

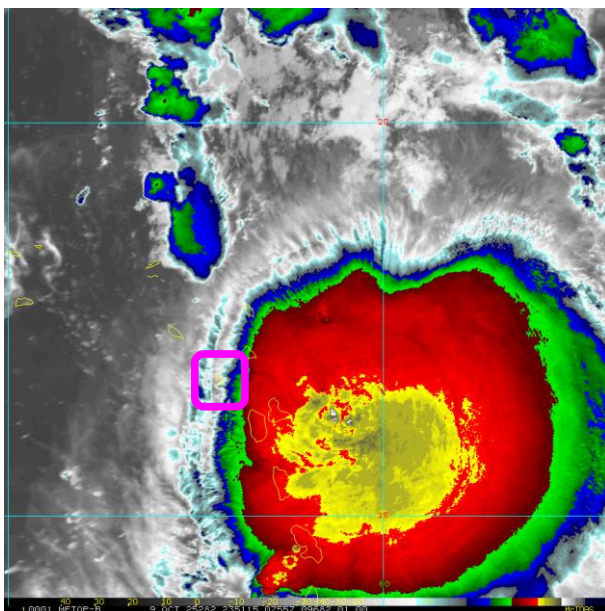
This event briefing is designed to review the modelled losses due to wind, storm surge and excess rainfall calculated by CCRIF's CWUIC model for affected CCRIF member water utilities, to be analyzed with respect to members' CWUIC policies. Montserrat Utilities Limited (MUL) was one of the CCRIF water utility member for which the CCRIF CWUIC loss model for wind, storm surge and excess rainfall produced losses due to this rainfall event.

2 INTRODUCTION

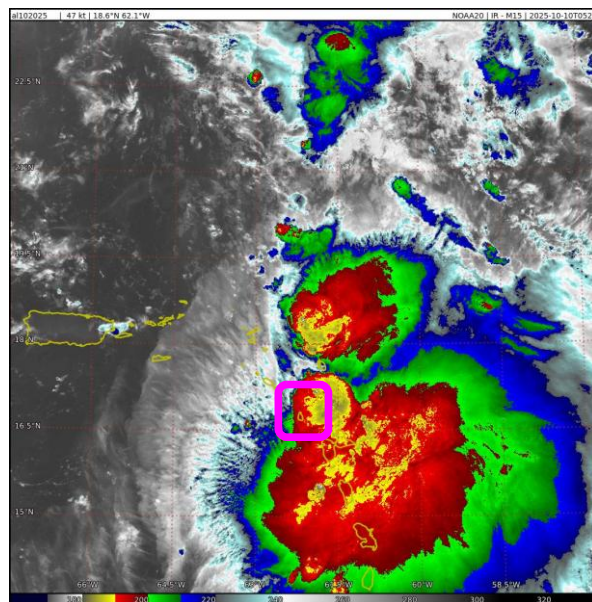
On 10 October 2025 at 0000 UTC, a tropical storm named Jerry was located over the western tropical Atlantic Ocean, approximately 140 mi (225 km) east-southeast of the northern Leeward Islands, moving toward the Leeward Islands at a forward speed of 18 mph (30 km/h). At that time, Jerry's centre was positioned at latitude 17.5° North and longitude 61.1° West, about 86 mi (139 km) east-northeast of Montserrat (Figure 1). This marked the storm's closest approach to Montserrat along its track.

Although Jerry was classified as a moderate-intensity tropical storm—with estimated maximum sustained winds of 65 mph (100 km/h) and a minimum central pressure of 1001 mb—satellite imagery revealed that it was poorly organized and strongly sheared. The low-level centre appeared fully exposed and elongated, while the main area of deep convection was displaced to the south and southeast of the centre (Figure 2a). This structure was the result of moderate vertical wind shear, which separated the storm's centre from its convective core, inhibiting any rapid intensification of the system.

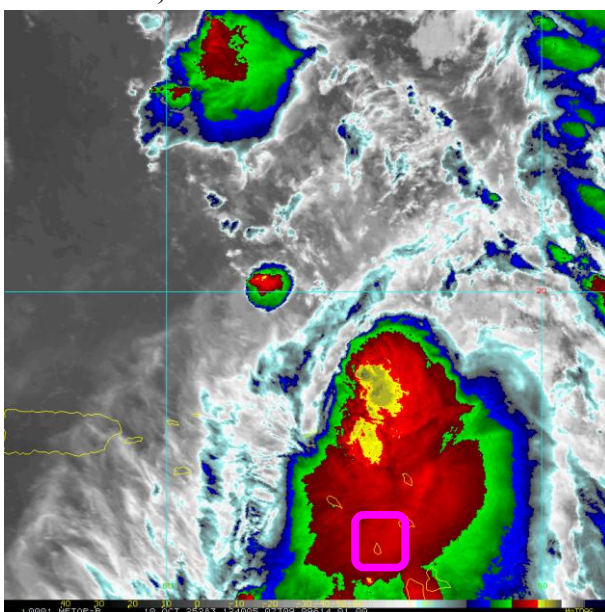
As a result, despite the storm's proximity, Montserrat had not yet experienced the heavy rainfall typically associated with the convective core of a tropical cyclone. This changed approximately 5 to 6 hours later, when the most intense convective nucleus, still located southeast of the storm's centre, began to approach the island (Figure 2b). The heavy rainfall associated with Jerry then affected Montserrat for about nine hours, until around 1400 UTC, when the convective core began



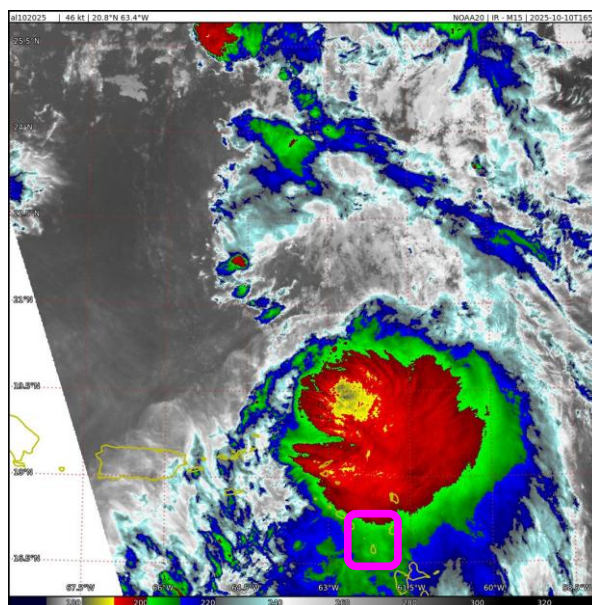
a) 9 October at 2351UTC



b) 10 October at 0529UTC



c) 10 October at 1240UTC



d) 10 October at 1650UTC

Figure 2 Satellite imagery on 9 and 10 October, 2025 at different times as indicated in the labels from the thermal infrared channel enhanced with colour. Blue/green colours represent high altitude clouds (top cloud temperature between -50°C and -70°C), while the red/yellow colours represent very high altitude clouds (top cloud lower than -70°C). High altitude clouds indicate strong convection associated with intense precipitation. Montserrat's position is highlighted by a violet square. Source: NOAA, National Environmental Satellite, Data and Information Service².

² RAMSDIS Online Archive, NOAA Satellite and Information Service, available at: https://rammb-data.cira.colostate.edu/tc_realtime/storm.asp?storm_idenfier=all02025

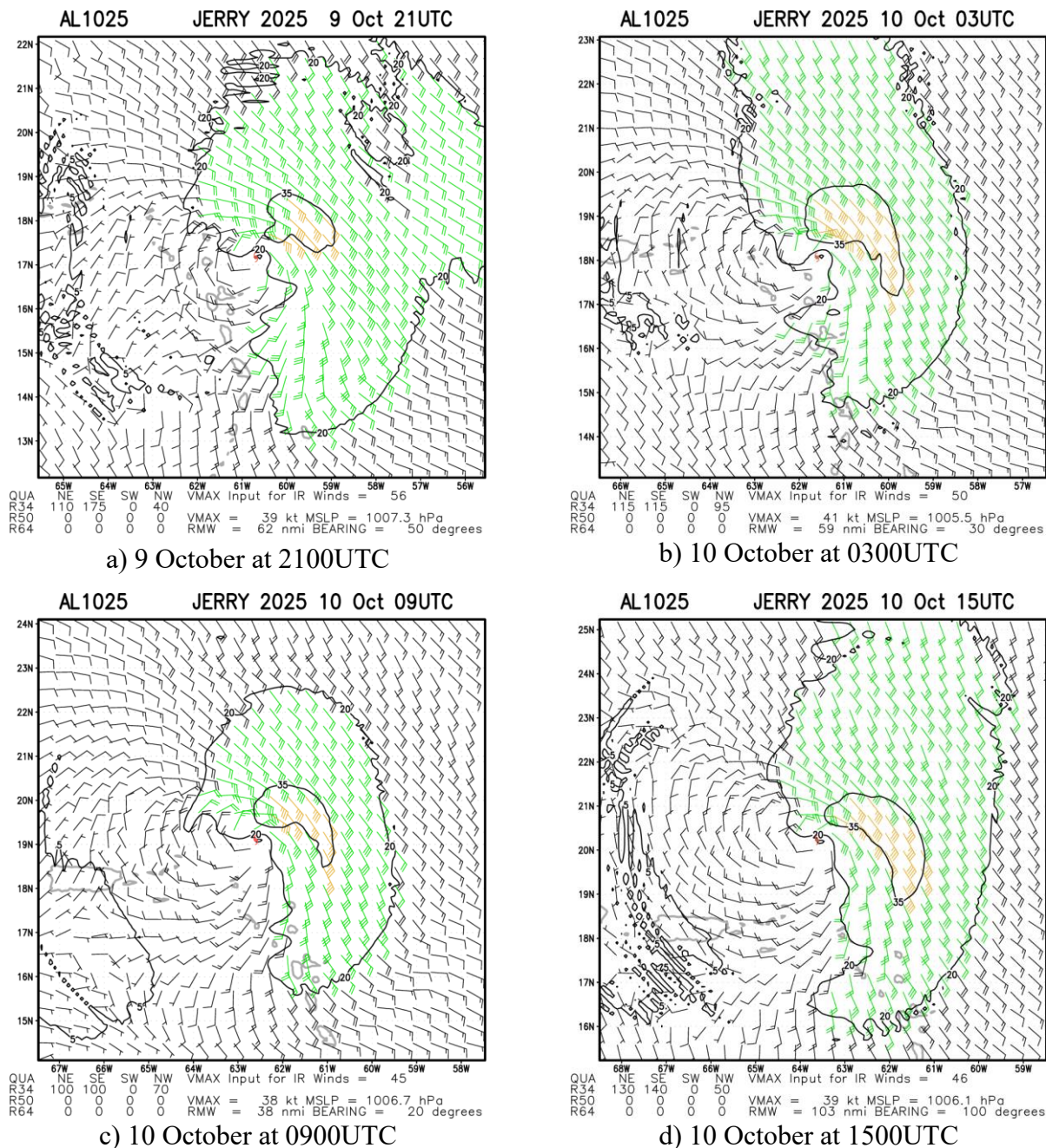


Figure 3 Multi-platform satellite based tropical cyclone surface wind analysis estimated on 9 and 10 October, 2025 at different times as indicated by the labels. Contouring indicates wind intensity at 20 kn (23 mph, 37 km/h), at 35 kn (40 mph, 65 km/h), 50 kn (57mph, 93 km/h), 65 kn (74mph, 120km/h) and 80 kn (92mph, 148km/h). Source: NOAA, National Environmental Satellite, Data and Information Service³

³ RAMSDIS Online Archive, NOAA Satellite and Information Service, available at: https://rammb-data.cira.colostate.edu/tc_realtime/storm.asp?storm_idenfier=al102025

3 CCRIF SPC MODEL OUTPUTS

The CWUIC model is made up of two components: the tropical cyclone (TC) component, accounting for the losses produced by wind and storm surge, and the excess rainfall (XSR) component, accounting for the losses associated with excess rainfall. Each of the two model components estimates a loss value specifically related to the hazard for which it is designed. When both a tropical cyclone and a Covered Area Rainfall Event (CARE) happen at the same time, the outputs of the two model components are added together. When only one model component, TC or XSR, reports losses associated with a specific event, only the losses produced for that component are counted. In the following description, the model output for each component is described separately.

TC Component

TC Jerry did not produce modelled losses due to wind and storm surge for MUL; therefore, the TC component was not activated.

XSR Component

All data sources used by the XSR 3.0 model, CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15⁴, detected the occurrence of precipitation over Montserrat and the surrounding waters during the period 08 to 10 October 2025. Each data source reported a specific distribution and accumulation of rainfall, as discussed below and shown in Figure 4. A CARE for Montserrat was activated on 10 October and closed on the same day. The CARE was activated due to the use of the 12-hour and the 48-hour aggregation intervals for precipitation and thus the period considered by the XSR 3.1 model for the loss estimate based on the accumulated precipitation in Montserrat was 08 to 10 October 2025.

CMORPH	CMORPH reported total accumulated values of precipitation higher than 60 mm over a portion of St. Georges parish. Values between 30 mm and 60 mm were reported over the remainder of the territory.
IMERG	IMERG reported total accumulated values of precipitation higher than 120 mm over a portion of St. Georges parish. Values between 90 mm and 120 mm were

⁴ CMORPH Model: the satellite-based rainfall precipitation estimates provided by the NOAA Climate Prediction Center (CPC) using the so-called Morphing Technique http://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html. Further details are provided in the Definitions section of this report

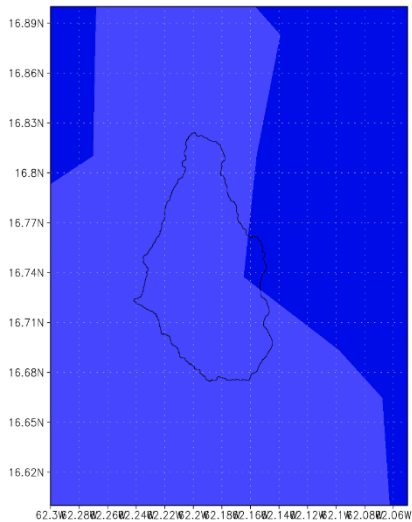
IMERG Model: The satellite-based rainfall estimation model developed by NASA, expressed in mm, derived by aggregating the IMERG 30-minute Rainfall Data at 10km spatial resolution and available at <https://jsimpsonhttps.pps.eosdis.nasa.gov/imerg/late>. Further details in the Definitions section of this report

WRF5, WRF7, WRF11 and WRF15 Models: the Weather Research and Forecasting Model weather model-based Configuration #1 and #2 data <https://www.mmm.ucar.edu/weather-research-and-forecasting-model>. These data are initialised by the NCEP FNL dataset. (NCEP FNL Operational Model Global Tropospheric Analyses [<http://rda.ucar.edu/datasets/ds083.2/>]). Further details are provided in the Definitions section of this report.

reported over the remainder of the territory.

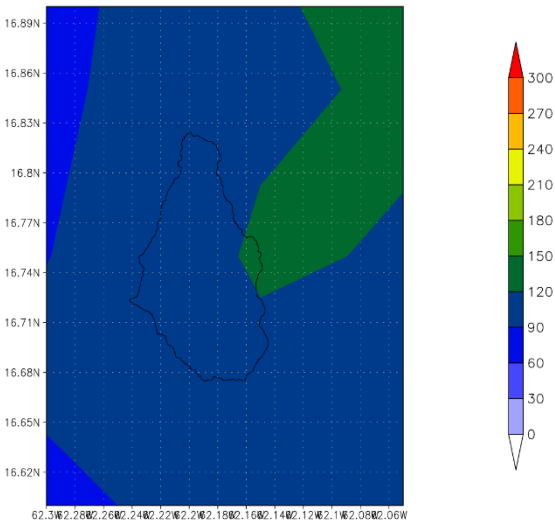
- WRF5 WRF5 showed total accumulated values of precipitation ranging between 60 mm and 120 mm over the entire country. The highest values, between 90 mm and 120 mm, were reported over the southeaster area of Montserrat.
- WRF7 WRF7 showed total accumulated values of precipitation higher than 60 mm over the southern half of Montserrat. The highest values, between 90 mm and 120 mm, were reported over a small area in St. Anthony parish. Values between 30 mm and 60 mm were shown over the rest of the territory.
- WRF11 WRF11 showed total accumulated values of precipitation ranging between 60 mm and 120 mm over the entire country. The highest values, between 90 mm and 120 mm, were reported over the southeaster area of Montserrat and over the northern area of St. Peter parish.
- WRF15 WRF15 reported accumulated values of precipitation higher than 150 mm over the southern half of Montserrat. The highest values, between 240 mm and 270 mm, were reported over the eastern area of St. Anthony parish and over a small area of St. Georges parish. Values lower than 150 mm were shown over the rest of the territory.

08 OCT – 10 OCT 2025 – CMORPH [mm]



a) CMORPH

08 OCT – 10 OCT 2025 – IMERG7 [mm]



b) IMERG7

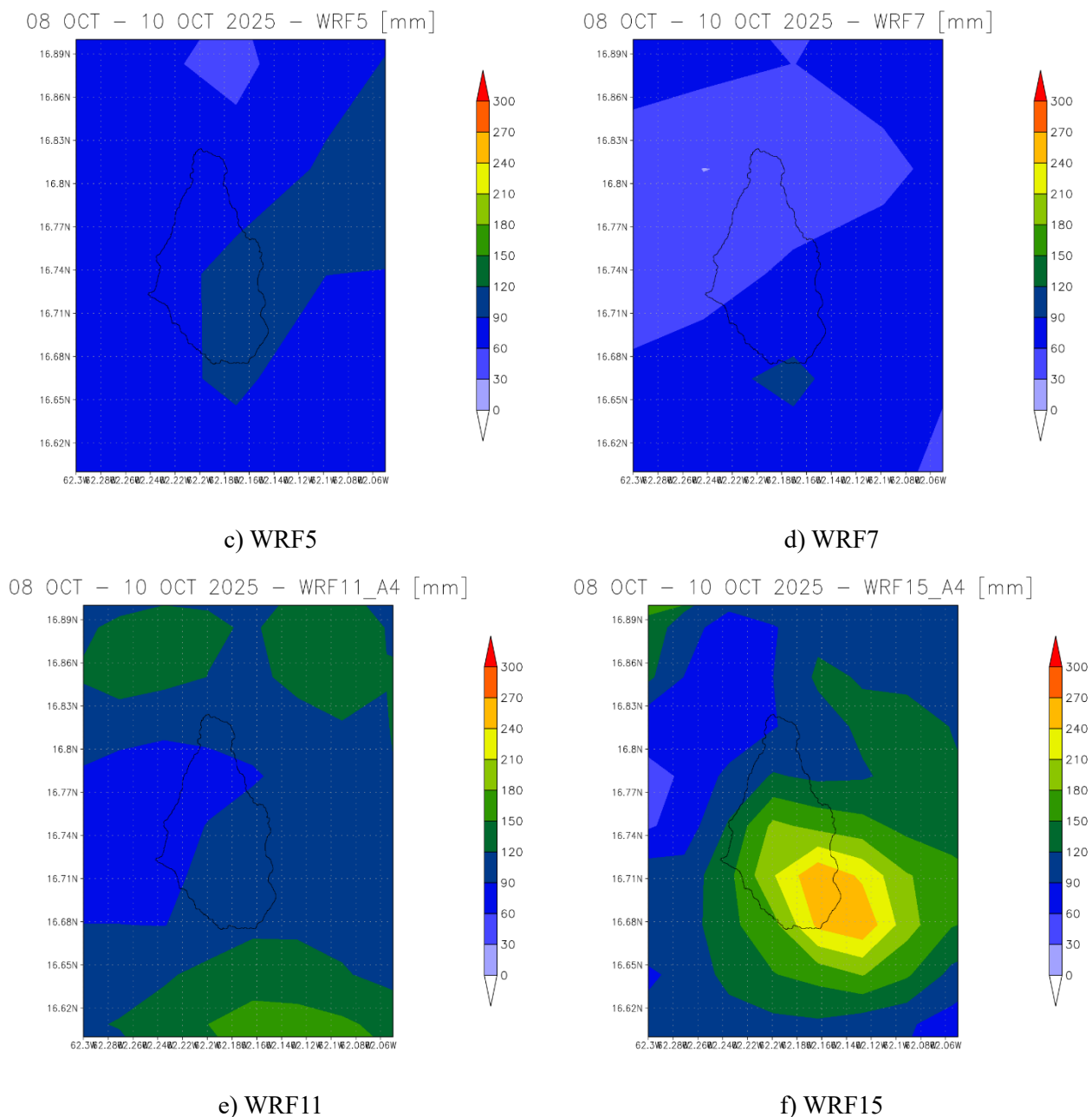


Figure 4 Total accumulated precipitation during the period 08 to 10 October 2025 estimated by CMORPH (a), IMERG7 (b), WRF5 (c), WRF7 (d), WRF11 (e), WRF15 (f). Source: CCRIF SPC

Daily rainfall maps by CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15 over the exposure map of CWUIC are not included here and they can be downloaded at the following links for 12-hour aggregation and 48-hour aggregation respectively:

https://wemap.ccrif.org/OUTPUT/CCRIF/CWUICXSR/Events/MSR/CARE_1_2025/daily_prec_short.mp4
https://wemap.ccrif.org/OUTPUT/CCRIF/CWUICXSR/Events/MSR/CARE_1_2025/daily_prec_long.mp4

The Rainfall Index Loss (RIL) was above the loss threshold for Montserrat for four of the data sources used by XSR3.1: IMERG, WRF5, WRF7 and WRF15. The RIL was the highest for WRF15.

The final RIL (RIL_{FINAL}) was calculated as the average of the four RILs from IMERG, WRF5, WRF7 and WRF15. The RIL_{FINAL} was below the attachment point of the Excess Rainfall component of MUL's CWUIC policy and therefore the policy was not triggered, thus no payout is due to the MUL under its CWUIC policy.

4 REPORTED IMPACTS

While Montserrat experienced rainfall from the indicated period, there were no reports at the time of producing this report of specific, confirmed damages to Montserrat Utilities Limited (MUL).

5 CCRIF LOSS MODEL

The final run of the CCRIF's CWUIC tropical cyclone and excess rainfall loss model for the Montserrat Utilities Limited (MUL), produced losses below the Attachment Point of its CWUIC policy and therefore no payout under this policy is due.

For additional information, please contact CCRIF SPC at: pr@ccrif.org

DEFINITIONS

<i>Active Exposure Cell Percentage Threshold</i>	The percentage of the total number of XSR Exposure Grid Cells within the Covered Area of the Insured, that must be exceeded to trigger a Covered Area Rainfall Event.
<i>Active Exposure Grid Cells</i>	The XSR Exposure Grid Cells for which in the same single day the Aggregate Rainfall #1 value computed using the CMORPH-based Rainfall Estimate equals or exceeds the Rainfall Event Threshold #1 or the Aggregate Rainfall #2 value computed using the CMORPH-based Rainfall Estimate equals or exceeds the Rainfall Event Threshold #2.
<i>Aggregate Rainfall #1</i>	The rainfall amount accumulated over the Rainfall Aggregation Period #1 (as defined in the Schedule) measured in millimeters(mm) in any of the XSR Exposure Grid Cells in the Covered Area of the Insured. For a given day and a Rainfall Aggregation Period #1 of n hours, the Aggregate Rainfall #1 is the maximum amount of rainfall accumulated over any of the n-hour windows that intersect the day itself considering a time interval of 3 hours.
<i>Aggregate Rainfall #2</i>	The rainfall amount accumulated over the Rainfall Aggregation Period #2 (as defined in the Schedule) measured in millimeters(mm) in any of the XSR Exposure Grid Cells in the Covered Area of the Insured. For a given day and a Rainfall Aggregation Period #2 of n hours, the Aggregate Rainfall #2 is the maximum amount of rainfall accumulated over any of the n-hour windows that intersect the day itself considering a time interval of 3 hours.
<i>Calculation Agent</i>	Entity charged with undertaking the primary calculation of the Rainfall Index Loss.
<i>CMORPH-based Maximum Aggregate Rainfall #1</i>	The maximum value during the Covered Area Rainfall Event of the Aggregate Rainfall #1 computed using the CMORPH-based Rainfall Estimates in any given XSR Exposure Grid Cell over the Covered Area of the Insured.
<i>CMORPH-based Maximum Aggregate Rainfall #2</i>	The maximum value during the Covered Area Rainfall Event of the Aggregate Rainfall #2 computed using the CMORPH-based Rainfall Estimates in any given XSR Exposure Grid Cell over the Covered Area of the Insured.

***CMORPH-based
Covered Area Rainfall
Parameters***

The CMORPH Model information provided on a continuous basis by the XSR Model Data Reporting Agency used by the Calculation Agent to obtain the CMORPH-based Rainfall Estimates using the XSR Rainfall Model. Parameters are drawn from XSR Exposure Grid Cells within the Covered Area of the Insured, by their respective latitude and longitude. Measurement units and precision of data ingested by the XSR Rainfall Model are identical to those provided by the XSR Model Data Reporting Agency and are further elaborated in the Attachment entitled 'Calculation of Rainfall Index Loss and Policy Payment

CMORPH Model

The satellite-based rainfall estimation model provided by NOAA CPC as described in the Rainfall Estimation Models section of the Policy.

Covered Area

The territory of the Insured as represented in the XSR Rainfall Model.

***Covered Area Rainfall
Event***

Any period of days, with an interruption less than or equals to the Event Tolerance Period, during which the number of Active Exposure Grid Cells is greater than or equal to the product of (a) Active Exposure Cell Percentage Threshold multiplied by (b) the total number of XSR Exposure Grid Cells within the Covered Area.

Country Disaster Alert

An official disaster alert issued by Relief Web (<http://reliefweb.int/>) for the country in question for one of the following types of events: tropical cyclone, flood, flash flood and severe local storm. Any disaster alert issued later than seven

(7) days after the completion of the Covered Area Rainfall Event (CARE) event will not be considered. The Disaster Alert description issued by Relief Web and/or its attached documentation must include specific reference to the CARE dates with a tolerance period of 2 calendar days.

<i>Maximum Aggregate Rainfall #1</i>	The highest value during a Covered Area Rainfall Event of the Aggregate Rainfall #1 amount in any of the XSR Exposure Grid Cells in the Covered Area of the Insured computed.
<i>Maximum Aggregate Rainfall #2</i>	The highest value during a Covered Area Rainfall Event of the Aggregate Rainfall #2 amount in any of the XSR Exposure Grid Cells in the Covered Area of the Insured computed.
<i>Rainfall Event Threshold #1</i>	Aggregate Rainfall #1 level as defined in the Schedule which should be exceeded to trigger an Active Exposure Cell.
<i>Rainfall Event Threshold #2</i>	Aggregate Rainfall #2 level as defined in the Schedule which should be exceeded to trigger an Active Exposure Cell.
<i>Rainfall Aggregation Period #1</i>	The number of hours over which the Aggregate Rainfall #1 is computed for all XSR Exposure Grid Cells during a Covered Area Rainfall Event.
<i>Rainfall Aggregation Period #2</i>	The number of hours over which the Aggregate Rainfall #2 is computed for all XSR Exposure Grid Cells during a Covered Area Rainfall Event.
<i>Rainfall Index Loss</i>	For any Covered Area Rainfall Event affecting the Insured, the US Dollar loss calculated by the Calculation Agent using the XSR Rainfall Model, as described in the Attachment entitled ‘Calculation of Rainfall Index Loss and Policy Payment’. The Rainfall Index Loss can only be calculated once the Covered Area Rainfall Event is completed.
<i>WRF5 Model</i>	The weather research and forecasting rainfall model by NOAA with Configuration #5 data initialized with and assimilating the data provided by the National Center for Environmental Prediction as described in the Rainfall Estimation Models and in the Input Data to the Rainfall Estimation Models sections of this Attachment.

WRF7 Model

The weather research and forecasting rainfall model by NOAA with Configuration #7 data initialized with and assimilating the data provided by the National Center for Environmental Prediction as described in the Rainfall Estimation Models and in the Input Data to the Rainfall Estimation Models sections of this Attachment.

XSR Rainfall Model

The computer model used to calculate the Rainfall Index Loss, as described in the Attachment entitled ‘Calculation of Rainfall Index Loss and Policy Payment’.

XSR Exposure Grid Cells

The 30 arc-second by 30 arc-second grid of cells each of which is attributed with an XSR Grid Cell Exposure Value greater than zero.

XSR Grid Cell Exposure Value

The value, used to calculate the CMORPH-based Exposure Grid Cell Loss, the WRF5-based Exposure Grid Cell Loss, and the WRF7-based Exposure Grid Cell Loss.