

Covered Area Rainfall Event (16/08/2026 to 18/08/2026)

Excess Rainfall

Event Briefing

Panama
Panama FAP

27 August 2026

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1 INTRODUCTION

This event briefing describes the impact of rainfall on Panama, which was associated with a Covered Area Rainfall Event (CARE) starting on 16 August and ending on 18 August 2026. The Rainfall Index Loss (RIL) for the Covered Area Rainfall Event was below the attachment point of Panama's Excess Rainfall policy and the Panama-FAP Excess Rainfall policy, and therefore no payout is due to the Government.

2 EVENT DESCRIPTION

Between 15 and 18 August 2026, Panama experienced intense and widespread precipitation associated with the propagation of two tropical waves across Central America, combined with favourable upper-level conditions and abundant moisture availability over southern Central America.

On 15 August at 1200 UTC, the first tropical wave was located over Nicaragua, while the second one was just entering the Caribbean domain from the east (Figure 1a). As the waves moved westward during the following two days, they promoted the development of unstable atmospheric conditions both ahead of and behind them. The additional development of a low-pressure system over northern Colombia, together with the approach of the monsoon trough towards Panama, further intensified upper-level divergence over southern Central America (Figure 1a). Moreover, abundant tropical moisture was transported over the region by strong easterly winds associated with a tight pressure gradient between a ridge over the western Atlantic Ocean and the Colombian low-pressure system (Figure 1a). The persistence of these pressure configurations during the following two days (Figure 1b, 1c, and 1d) provided favourable conditions for the development of numerous moderate to strong thunderstorms over the waters offshore of Costa Rica and Panama, as well as across most of Panama and northwestern Colombia.

On 15 August, heavy precipitation mainly affected southwestern Panama and the Darién region, largely driven by the residual instability associated with the first tropical wave. By 16 August, the first tropical wave had left Central America, while the second wave had moved into the central Caribbean, contributing to the development of widespread moderate to strong convection over a broad area south of latitude 20° North, including Panama. During 17 August, as the second wave progressed westward to approximately longitude 75° West, numerous moderate to strong thunderstorms were observed over the waters offshore of Nicaragua, Costa Rica, and Panama, as well as across most of Panama and northwestern Colombia, as shown by the satellite imagery in Figure 2. By 18 August, the second tropical wave had shifted farther westward toward longitude 78° West, while convective activity gradually propagated from eastern to western Panama, eventually moving out of the country on 19 August as the second tropical wave continued westward across Central America. This marked the end of the precipitation event over Panama.

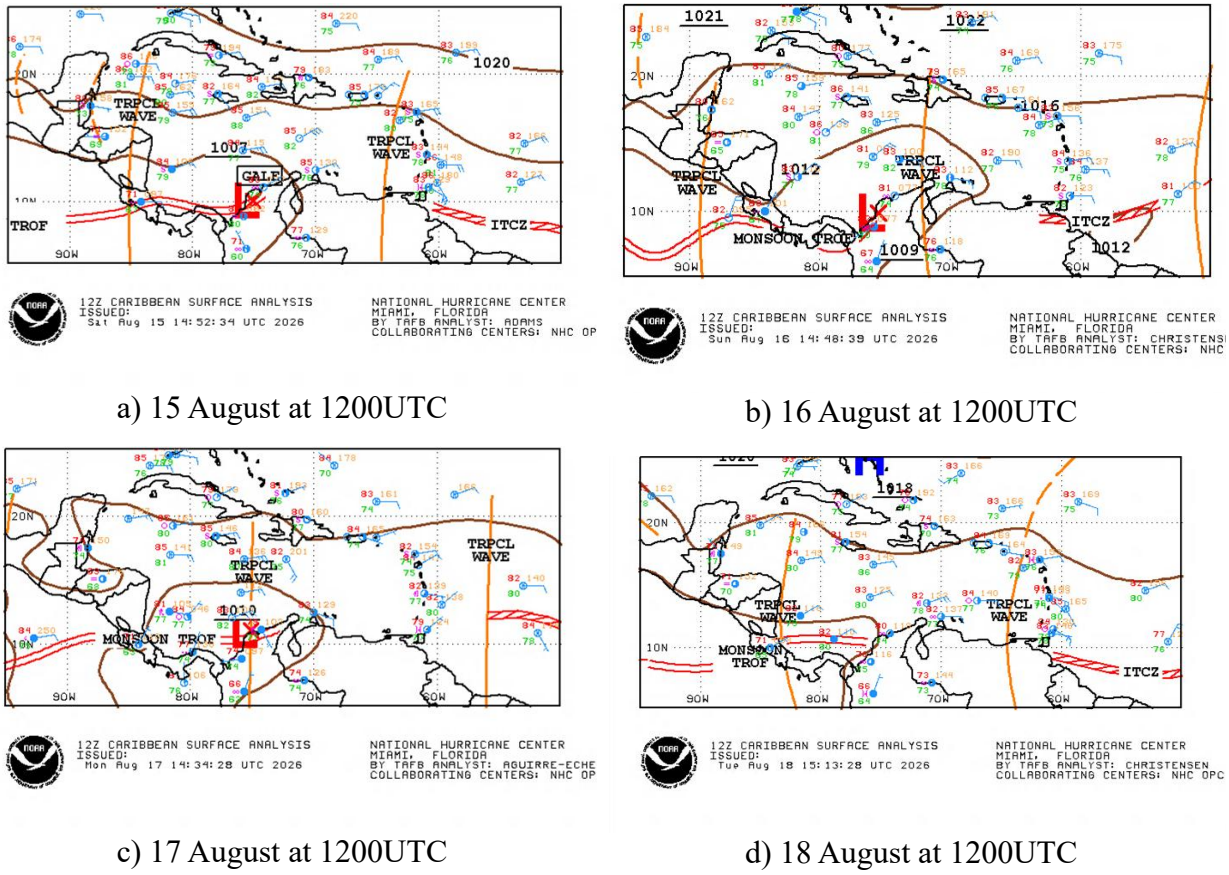


Figure 1 Surface analysis over the Caribbean area between 15 and 18 August at different times as indicated by the labels. Source: US National Hurricane Center[1]

[1] National Oceanic and Atmospheric Administration - FTP, National Hurricane Center, review dates: 15-18 August 2026, available at: https://www.nhc.noaa.gov/tafb /CAR12Z.gif

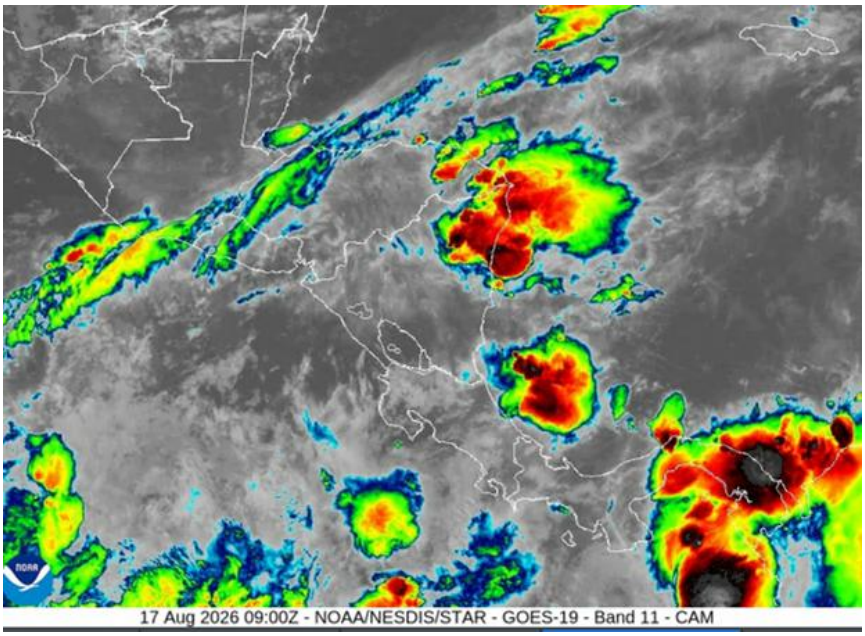


Figure 2 Satellite imagery on 17 August, 2026 at 0900UTC from the thermal infrared channel enhanced with colour.. Blue/green colours represent high altitude clouds (top cloud temperature between -50°C and -70°C), while the red/yellow colours represent very high altitude clouds (top cloud lower than -70°C). High altitude clouds indicate strong convection associated with intense precipitation. Source: NOAA, National Environmental Satellite, Data and Information Service[2].

3 REPORTED IMPACTS

Heavy rains in the province of Bocas del Toro and Chiriquí caused widespread flooding, landslides and fallen trees across several districts, prompting continuous monitoring and inter-agency response actions. According to the official situation report of SINAPROC[3] (Sistema Nacional de Protección Civil), in Bocas del Toro 703 homes and 1,161 people were affected, with 21 people remaining evacuated and 103 accommodated in temporary shelters due to persistently high water levels that made it unsafe for them to return home. The most significant impacts were concentrated in communities in the districts of Changuinola, Almirante and Chiriquí Grande, where flooding, landslides, blocked roads and damage to access routes were recorded. In Chiriquí, intense rains and strong wind gusts led to multiple incidents in and around the district of David, including landslides affecting road access, trees falling onto houses and public roads, and water entering at least one dwelling due to the collapse and overflow of the local drainage system, requiring on-site assessments, debris removal and risk reduction measures.

[2] RAMSDIS Online Archive, NOAA Satellite and Information Service, available at: https://www.star.nesdis.noaa.gov/GOES/sector.php?sat=G19&sector=car

[3] Continúan las acciones interinstitucionales para atender afectaciones en Bocas del Toro - Sinaproc

4 RAINFALL MODEL OUTPUTS

All data sources used by the CCRIF Excess Rainfall XSR 3.1 model, CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15[4], detected the occurrence of precipitation over Panama and the surrounding region during the period 14 to 18 August 2026. Each data source reported a specific distribution and accumulation of rainfall, as discussed below and shown in Figure 3. A CARE was activated on 16 August and lasted two days, closing on 18 August 2026. 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 Panama was 14 to 18 August 2026.

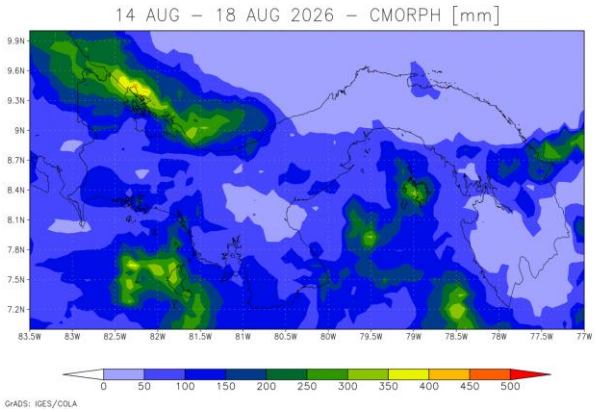
Table 1: Report from XSR 3.1 Data Sources on the Precipitation over Panama from 14 to 18 August 2026

CMORPH	CMORPH reported total accumulated precipitation values higher than 150 mm over the northwestern and northeastern sectors of Panama (respectively, over the provinces of Bocas del Toro and Darién). The highest values, between 300 mm and 350 mm, were reported along a small portion of the Caribbean coast of Bocas del Toro province. Lower values, generally below 100 mm, were reported over the central sector and the Canal region.
IMERG	IMERG reported total accumulated precipitation values following a geographical pattern and intensity similar to those of CMORPH, with slightly lower maximum values, between 200 mm and 250 mm, reported along a small portion of the Caribbean coast of Bocas del Toro province.
WRF5	WRF5 showed total accumulated precipitation values higher than 200 mm over three distinct areas: i) the Caribbean coast along the Mosquito Gulf and the highlands of the Canal region, ii) the eastern Pacific coast and the eastern slopes of Darién, and iii) the western portion of the Azuero Peninsula. The highest values, between 350 mm and 400 mm, were reported in small regions within each of the three areas. Lower values, mostly below 100 mm, were reported over the rest of the country.
WRF7	WRF7 showed a broader and more spatially distributed pattern of total accumulated precipitation values across the country compared to that of WRF5, spanning the central and eastern sectors of Panama. The highest values, between 400 mm and 500 mm, were reported in the eastern sector of the Darién slopes.

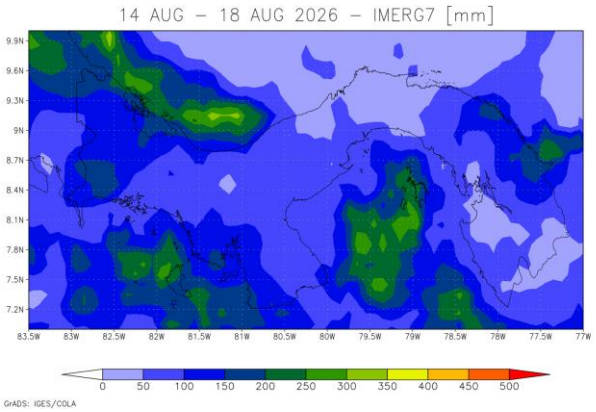
[4] CMORPH Model: the satellite-based rainfall precipitation estimates provided by the NOAA Climate Prediction centre (CPC) using the so-called Morphing Technique. Further details are provided in the Definitions section of this report IMERG Model: The satellite-based rainfall estimation model developed 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.

WRF11 WRF11_A2 showed total accumulated precipitation values higher than 300 mm over two distinct areas: a wide band spanning from Chiriquí to Coclé provinces in northwestern Panama and an area over Darién province. The highest values, between 450 mm and 500 mm, were reported over the central cordillera between Chiriquí and Coclé and over the eastern slopes of Darién province. Values below 150 mm were reported over the Azuero Peninsula and the south-central sector of the country.

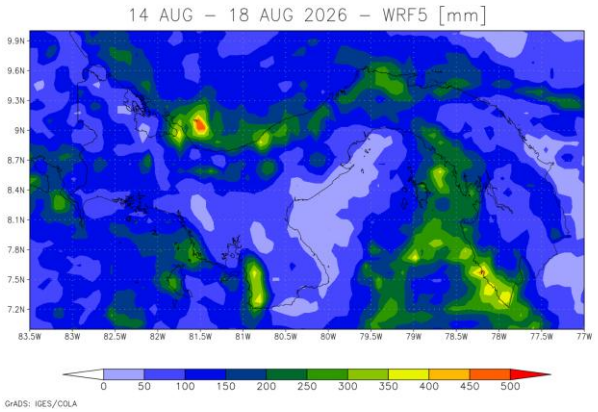
WRF15 WRF15_A2 reported total accumulated precipitation values higher than 300 mm over multiple scattered nuclei distributed across the entire country. The highest values, between 400 mm and 500 mm, were reported over Chiriquí province, along the western coast of the Azuero Peninsula, and over the extreme eastern portion of the Darién province. Values below 150 mm were reported over the remaining parts of the country.



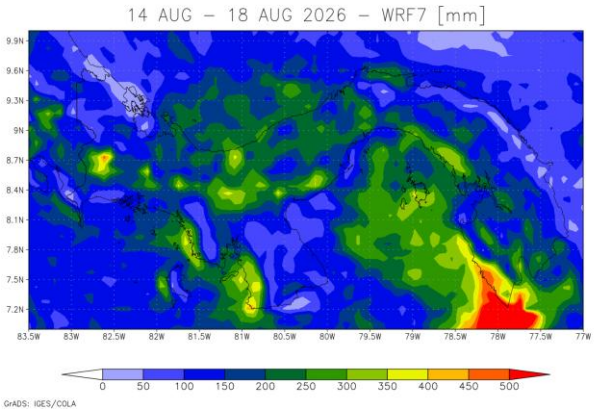
a) CMORPH



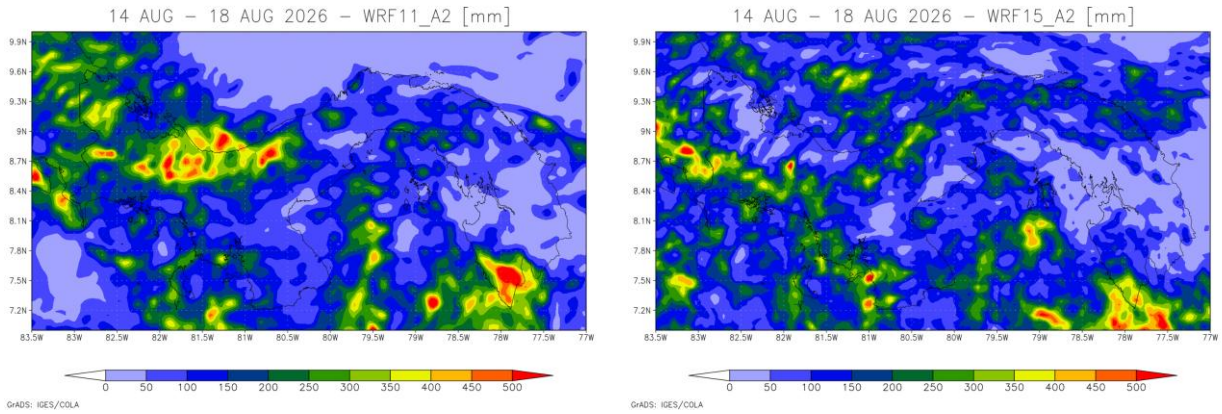
b) IMERG



c) WRF5



d) WRF7



e) WRF11

f) WRF15

Figure 4 Total accumulated precipitation during the period 14 to 18 August 2026 estimated by CMORPH (a), IMERG (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 XSR 3.1 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/XSR/Events/PAN/CARE_6_2026/daily_prec_short.mp4

https://wemap.ccrif.org/OUTPUT/CCRIF/XSR/Events/PAN/CARE_6_2026/daily_prec_long.mp4

The Rainfall Index Loss (RIL) was above the loss threshold for Panama for all the six data sources used by XSR 3.1: CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15. The RIL was the highest for WRF7.

The final RIL (RIL_{FINAL}) was calculated as the average of the six RILs from CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15. The RIL_{FINAL} was below the attachment point of Panama's Excess Rainfall policy and the Panama FAP Excess Rainfall policy and therefore neither of these were triggered. Therefore, no payout is due to the Government of Panama under its Excess Rainfall policies.

5 TRIGGER POTENTIAL

The Rainfall Index Loss calculated for the Covered Area Rainfall Event (CARE) was below the attachment point of Panama's Excess Rainfall policy and the Panama-FAP Excess Rainfall policy. Therefore no payout is due.

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

DEFINITIONS

Active Exposure Cell Percentage Threshold	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.
Active Exposure Grid Cells	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.
Aggregate Rainfall #1	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.
Aggregate Rainfall #2	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.
Calculation Agent	Entity charged with undertaking the primary calculation of the Rainfall Index Loss.
CMORPH-based Maximum Aggregate Rainfall #1	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.
CMORPH-based Maximum Aggregate Rainfall #2	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 ReliefWeb (*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 ReliefWeb and/or its attached documentation must include specific reference to the CARE dates with a tolerance period of 2 calendar days.
Maximum Aggregate Rainfall #1	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.
Maximum Aggregate Rainfall #2	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.
Rainfall Event Threshold #1	Aggregate Rainfall #1 level as defined in the Schedule which should be exceeded to trigger an Active Exposure Cell.

Rainfall Event Threshold #2	Aggregate Rainfall #2 level as defined in the Schedule which should be exceeded to trigger an Active Exposure Cell.
Rainfall Aggregation Period #1	The number of hours over which the Aggregate Rainfall #1 is computed for all XSR Exposure Grid Cells during a Covered Area Rainfall Event.
Rainfall Aggregation Period #2	The number of hours over which the Aggregate Rainfall #2 is computed for all XSR Exposure Grid Cells during a Covered Area Rainfall Event.
Rainfall Index Loss	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.
WRF5 Model	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.