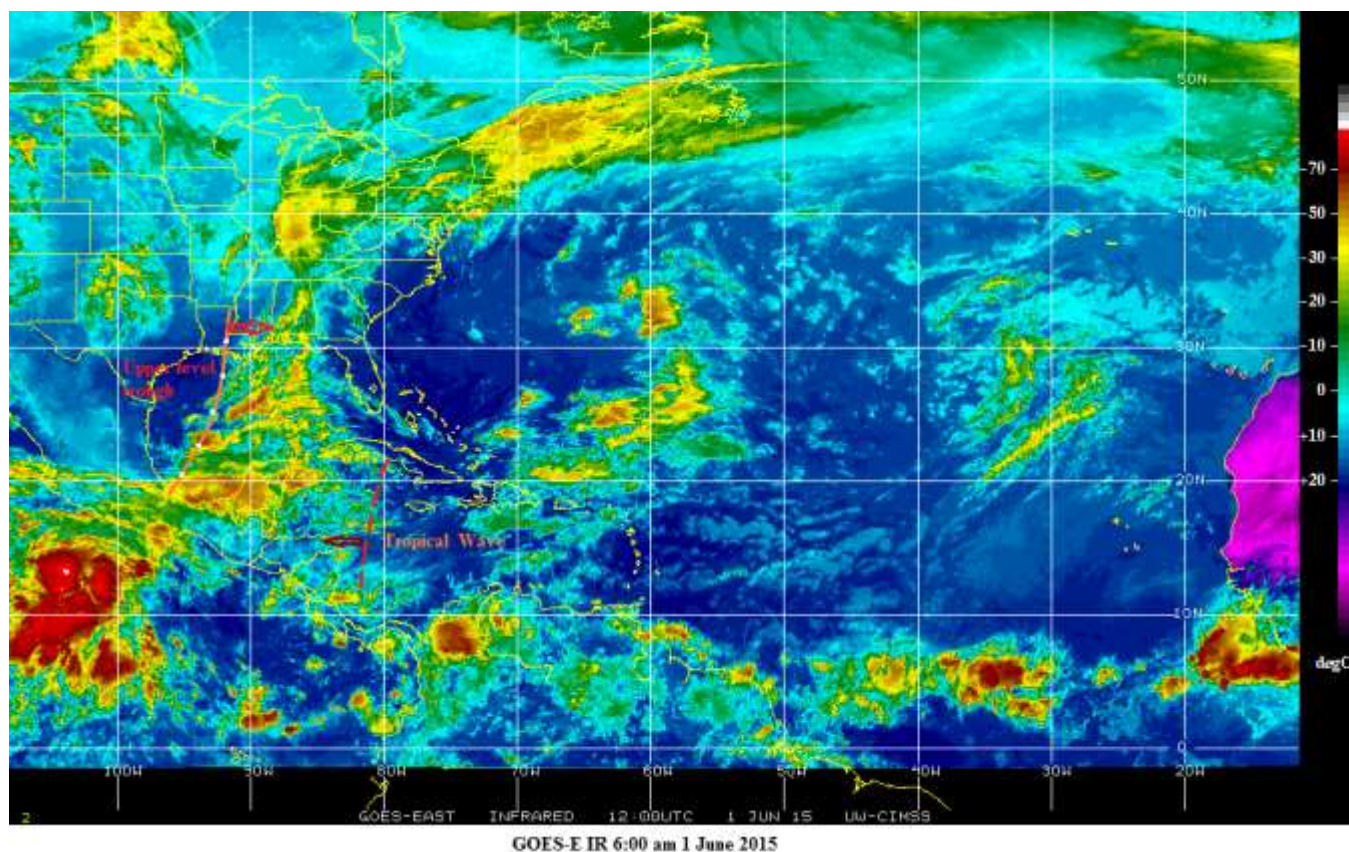


## *Ten day Outlook for Belize*

May 25 – June 5, 2015

*Update... 7:00 am , Monday, June 1, 2015*



Infrared satellite image this morning showing widespread convection across the eastern half of the Gulf of Mexico, southern Mexico, Yucatan and Belize, ahead of an eastward drifting short-wave upper level trough in the central Gulf of Mexico and a westward-moving TW in the western Caribbean. These systems will produce widespread rain showers with thunderstorms over Belize during the next three days or so. Rainfall will be concentrated over central and northern Belize and the coast. Rainfall rates will be in the range of 0.50 – 1.25 inch/24 hour through Wednesday over most districts, with total accumulations of 1 – 2 inches in some areas of the elevated terrain and the coast over the next 3 days.

ABNT20 KNHC 011134  
TWOAT

**TROPICAL WEATHER OUTLOOK**  
**NWS NATIONAL HURRICANE CENTER MIAMI FL**  
**800 AM EDT MON JUN 1 2015**

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:

Tropical cyclone formation is not expected during the next 5 days.

Today marks the first day of the Atlantic hurricane season, which will run until November 30. Long-term averages for the number of named storms, hurricanes, and major hurricanes are 12, 6, and 3, respectively.

The list of names for 2015 is as follows:

Name	Pronunciation	Name	Pronunciation
-----	-----	-----	-----
Ana	AH-nah	Larry	LAIR-ree
Bill	bill	Mindy	MIN-dee
Claudette	klaw-DET	Nicholas	NIH-kuh-luss
Danny	DAN-ee	Odette	oh-DEHT
Erika	EHR-ih-kuh	Peter	PEE-tur
Fred	frehd	Rose	roh-z
Grace	grayss	Sam	sam
Henri	ahn-REE	Teresa	tuh-REE-suh
Ida	EYE-duh	Victor	VIK-tur
Joaquin	wah-KEEN	Wanda	WAHN-duh
Kate	kayt		

The Atlantic season got off to an early start this year, with Tropical Storm Ana forming in May. The next named storm that forms this season will be Bill.

## *Ten day Outlook for Belize*

### *Update... Sunday, May 31, 2015*

The updated GFS & GFS-MNSPRD forecast models (6:00 am, May 31, 2015 run) are still resolving an upper level trough extending North – South across the central Gulf of Mexico moving eastwards over the next 72 – 120 hours. This upper level trough is expected to interact with an approaching tropical wave that will be in the extreme NW Caribbean within the next 72 hours (See Figure 1 – 3 below; Wed., June 3, 2015).

These features will bring moisture and instability over the NW Caribbean and Belize, resulting in widespread showers with thunderstorms this week. This activity will start as early as Monday and Tuesday of this week, with heavier precipitation on Tuesday night and Wednesday, especially over the northern half of the country and over the coast and sea. A low will move off-shore Belize on Wednesday, and is forecast to gradually drift NW towards western Cuba by Friday morning. The low will continue NW as the upper level trough picks it up and steers the low towards the western Atlantic.

Some areas of central and northern Belize could receive 1.5 to 2 inches of rainfall with higher amounts locally along the coast and the central highlands. The activity will decrease later on Wednesday, but the persisting moisture and instability will result in more outbreaks of showers through Friday and Saturday, but decreasing on Sunday.

This event could evolve into the start of the rainy season for 2015 over Belize. Remember that during an El Nino year, rainfall over the Atlantic coast of northern Central America can be very variable, with a tendency for dry spells during the wet months.

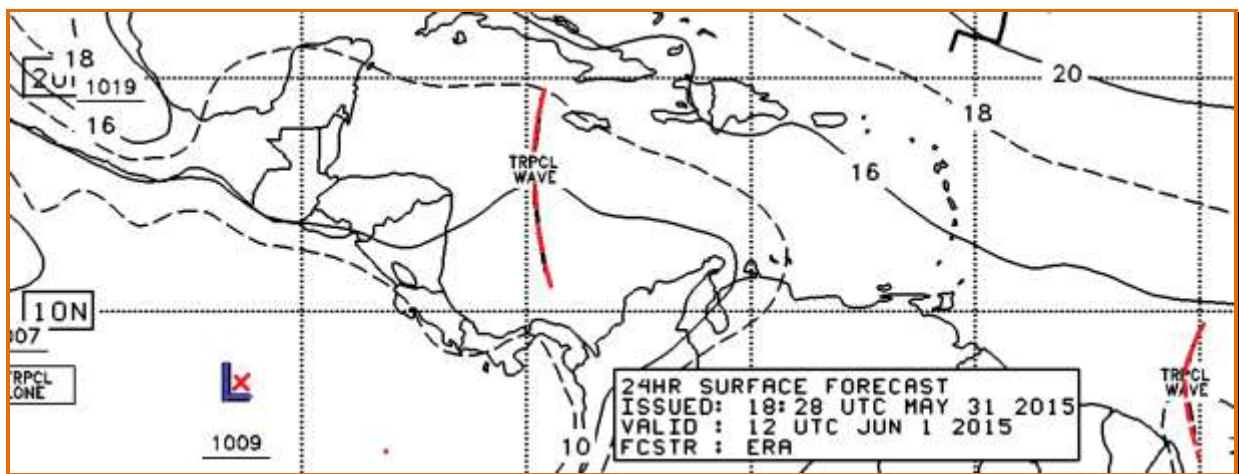


Figure 1: NHC 24-hr forecast surface chart (6:00 am Jun 1, 2015) showing tropical wave west of Jamaica

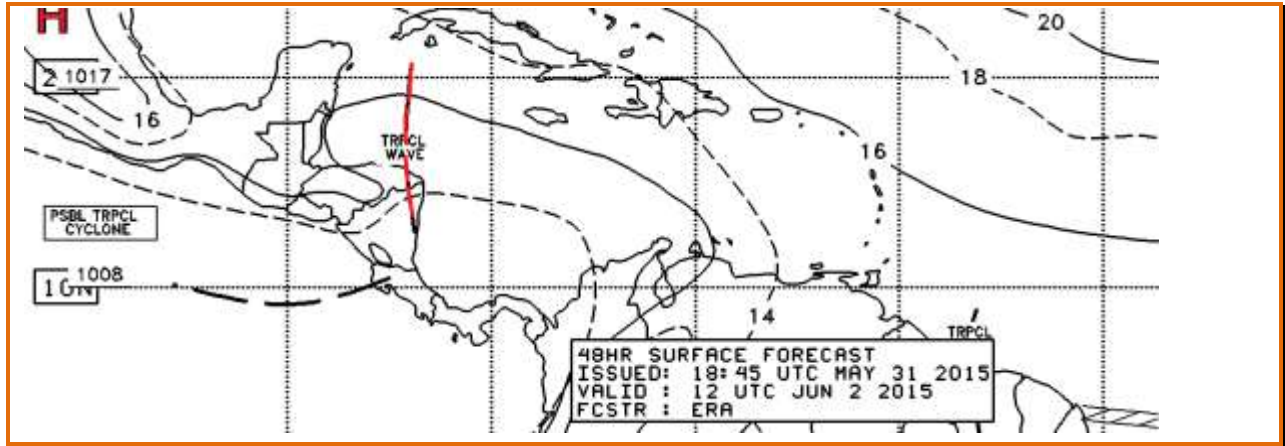


Figure 2: NHC 48-hr forecast surface chart (6:00 am Jun 2, 2015) showing tropical wave along 85° W

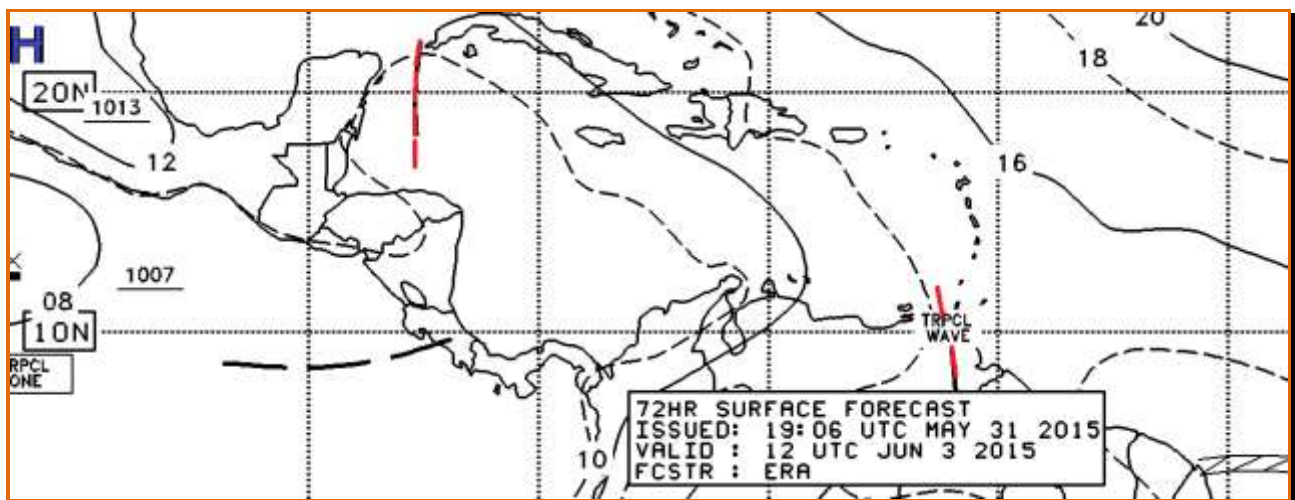


Figure 3: NHC 72-hr forecast surface chart (6:00 am Jun 2, 2015) showing tropical wave along 86° W

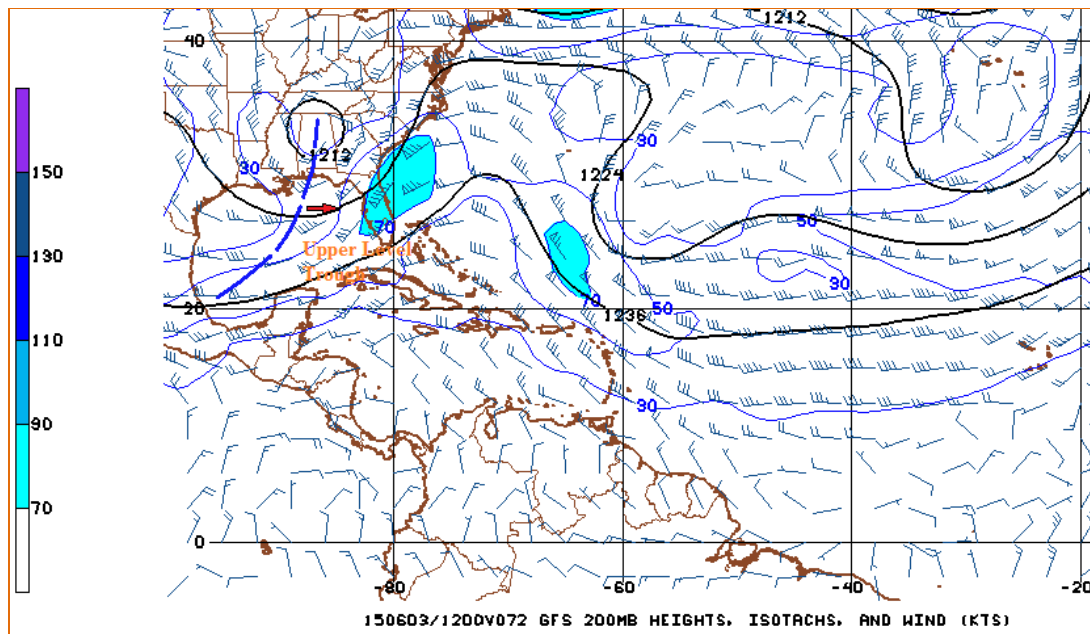


Figure 4: GFS 200 mb (53,000 ft) wind flow showing upper level trough moving eastwards through the Gulf of Mexico

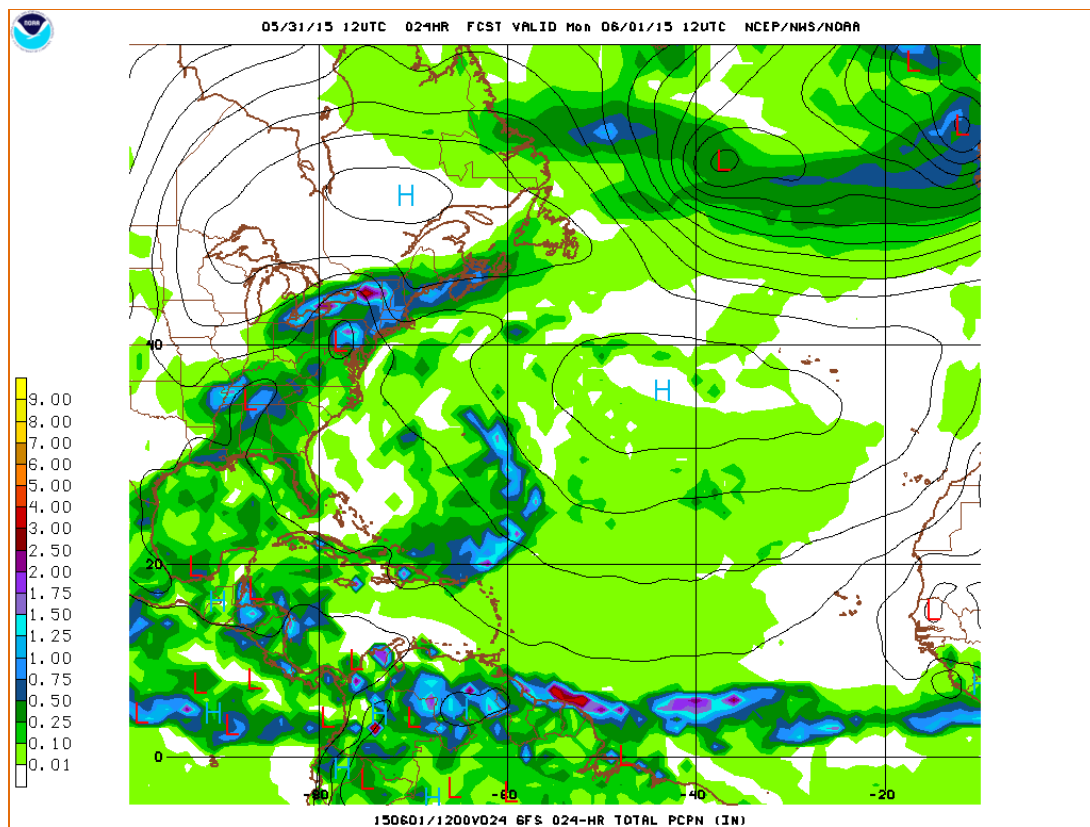


Figure 5: GFS model 24-hr precipitation forecast map showing low over Belize with 1.0 – 2.0 inch/24hr rainfall mostly over coastal districts and the sea.

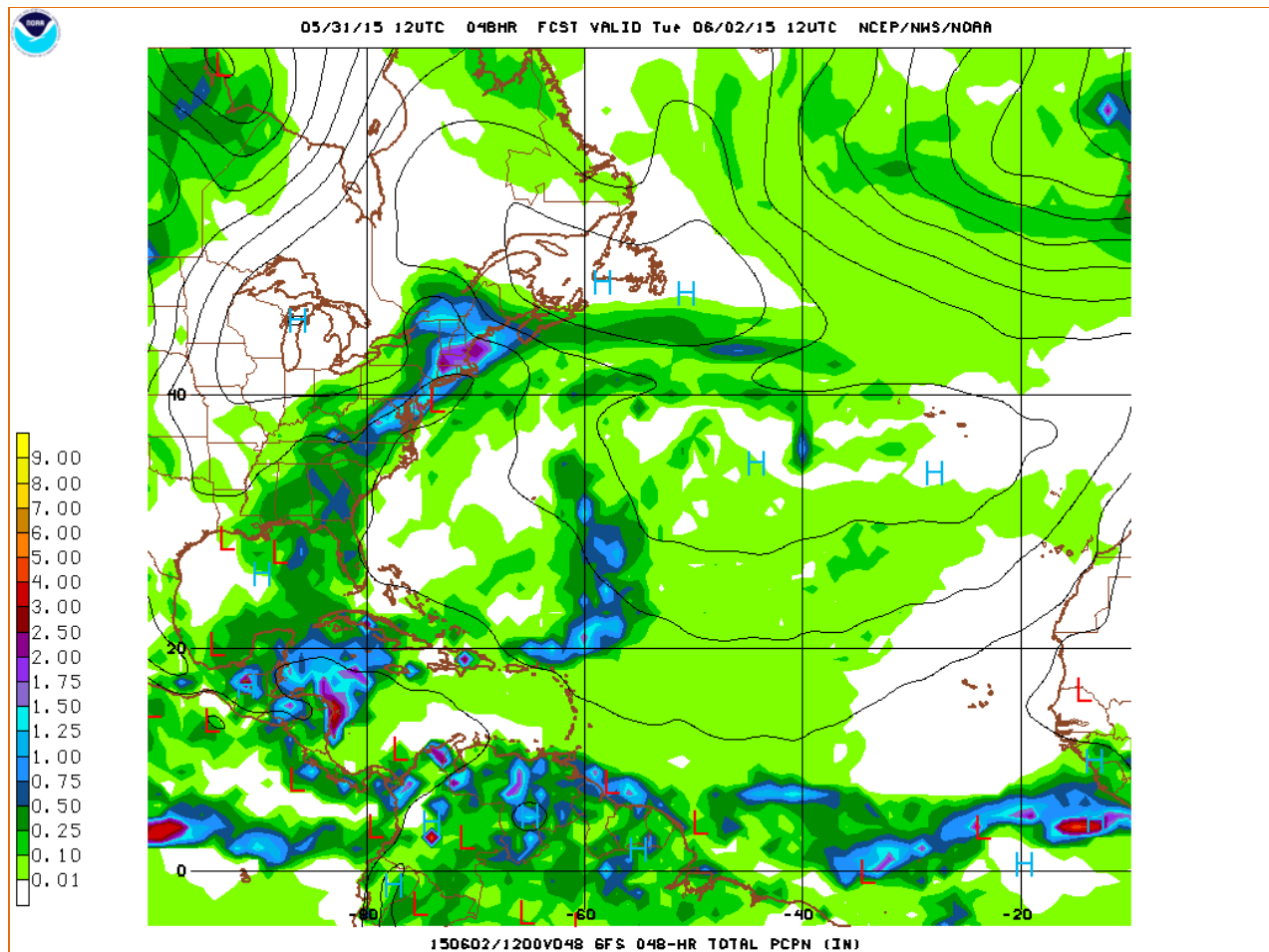


Figure 6: GFS model 48-hr precipitation forecast map showing low pressure system over Belize with 0.5 – 1.5 inch/24hr rainfall mostly over northern districts and the sea.

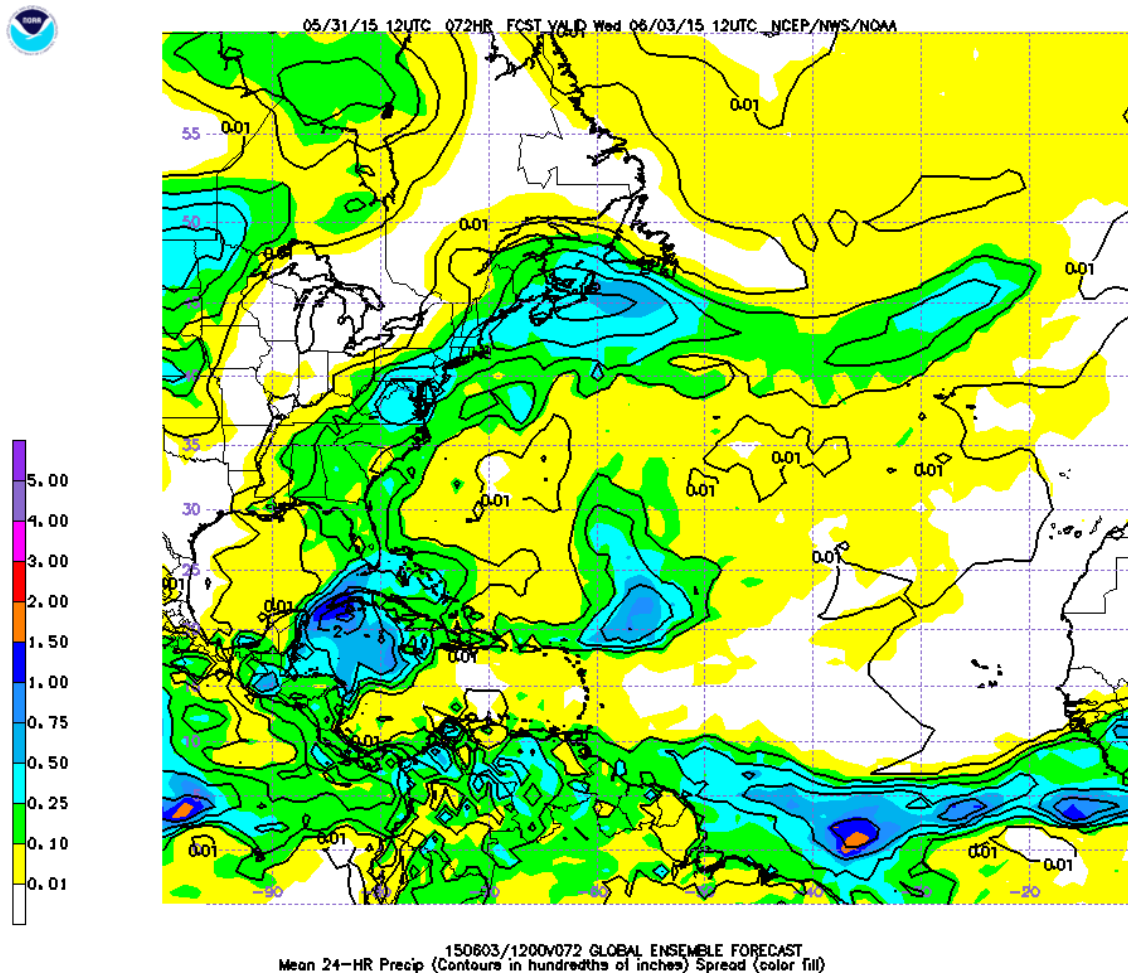


Figure 7: GFS-MNSPRD model 72-hr precipitation forecast map showing 24-hr rainfall rates of 0.25 – 0.75 inch/24hr rainfall mostly over central and northern areas and over the sea

*R. Frutos*  
*Sunday, May 31, 2015*

**Date: May 25, 2015**

### **Onset of the Rainy Season, 2015**

Rainfall accumulation of half inch to one inch was recorded over southern and coastal Belize, and about half an inch in central and western regions on Saturday last (May 23, 2015). In northern districts, some areas also received about half inch. The instability generating the showers and thunderstorms was short-lived and died away by early Sunday. The models were expecting this rainfall event to be brief. So, we can conclude that this was not the *onset* of the rainy season 2015 as it did not meet the criteria.

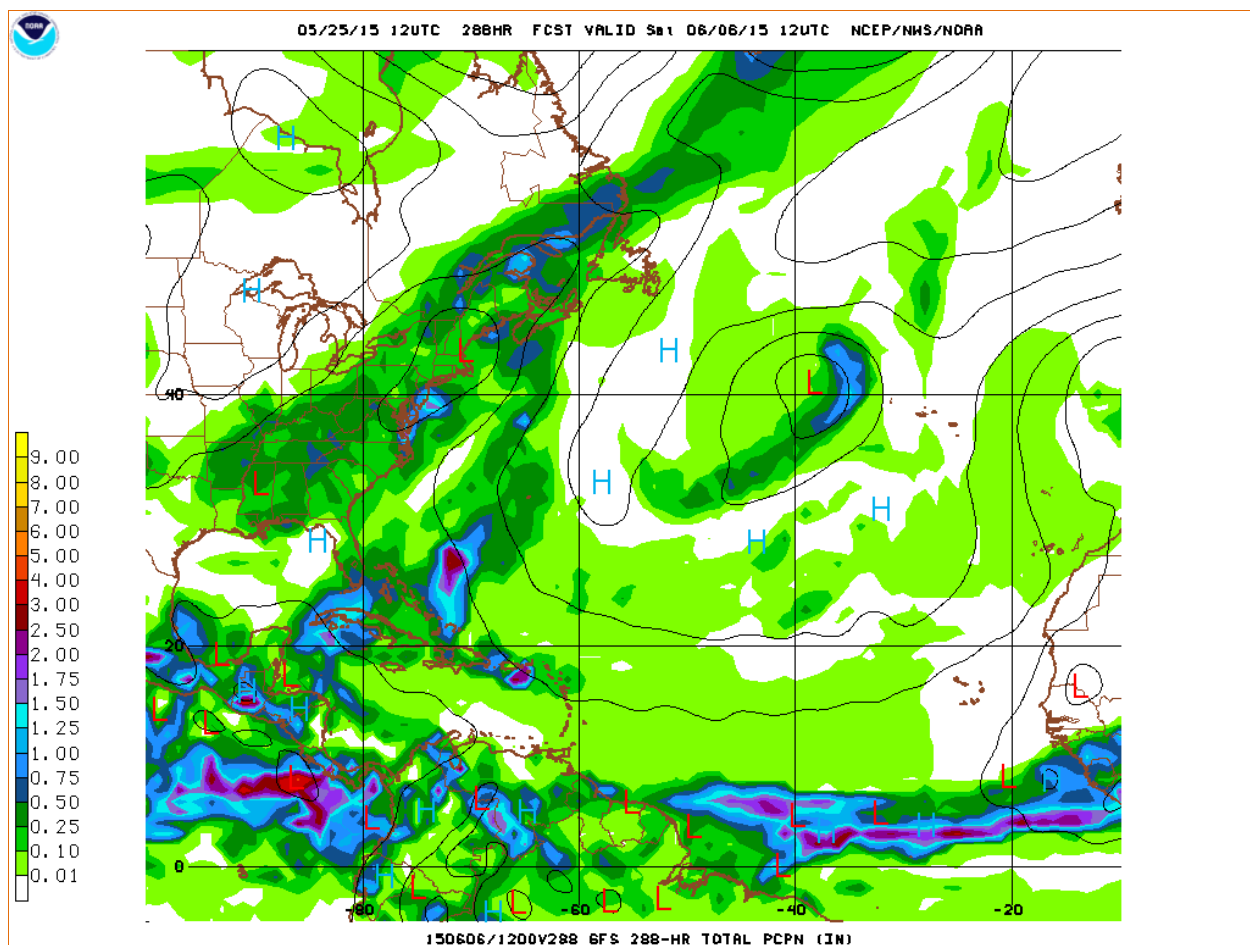
The brief review, discussed in an earlier report, with regards the *onset* of the rainy season at Spanish Lookout and Belmopan during El Niño years, shows that rainfall behavior is variable, with a high tendency for *false starts*. There is a higher probability for the *start* of the rains to occur during the last *dekad* in May and the first *dekad* in June in the Spanish Lookout area, while around Belmopan, the *onset* of the rains is more probable during the second *dekad* in June in El Niño years.

### **Outlook**

An analysis of the 10-day GFS and GFS-MNSPRD models prediction indicate that a fairly strong subsidence inversion in the East – Northeast trade wind flow will support only isolated shallow convection across Belize during the rest of May and through most of the first week of June. Therefore, expect little in the form of significant rainfall over the next 8 to 9 days which could increase the moisture content of the soil.

The models are resolving an energetic, eastward-moving upper level shortwave trough over the central Gulf of Mexico and southern Mexico on June 4-5. This feature, along with low pressures over northern Central America will induce a marked increase in convection over Yucatan, Guatemala, Belize and western Honduras. Vigorous outbreaks of showers and thunderstorms will begin to move across SW Belize on Friday, June 5, then spreading across the rest of Belize through Saturday and Sunday June 6-7, 2015. This activity is expected to persist through most of the second week of June. The GFS 288-hr. precipitation forecast map (Figure 1 below), shows rainfall rate of 0.10-0.25 of-an-inch/24hr in SW Belize for the morning of Saturday, June 6, 2015. The daily rainfall rates will increase over the rest of the weekend through most of the following working week.

This event will *very likely* mark the *onset* of the 2015 rainy season in Belize.



**Figure 1: GFS 288 hr Model projections valid for 6:00 am, Saturday, June 6, 2015, showing low pressure over Belize, and cumulative rainfall in the range of 0.10–0.25 inch/24 hrs) spreading from the SW over Belize.**

### *North Atlantic Basin 2015 Hurricane Season Prediction*

<i>Forecasts</i>	<i>Named Storms</i>	<i>Hurricanes</i>	<i>Major Hurricane</i>	<i>Caribbean</i>	<i>ACE*</i>
CSU (Klotzbach & Gray)	7	3	1	22% probability that one major hurricane will move through the Caribbean.	40
TRS	11	5	2	--	56
INSMET (Cuba)	8	3	--	50 %	--
Median	<b>12</b>	<b>6.5</b>	<b>2.0</b>	<b>42%</b>	

\*ACE ...accumulated cyclone energy

Below is Philip Klotzbach's and Dr. William Gray's (Colorado State University) *Abstract* for their 2015 Atlantic Basin Hurricane Season Forecast issued on 9 April, 2015.

## ABSTRACT

Information obtained through March 2015 indicates that the 2015 Atlantic hurricane season will likely have much less activity than the median 1981-2010 season. We estimate that 2015 will have only 3 hurricanes (median is 6.5), 7 named storms (median is 12.0), 30 named storm days (median is 60.1), 10 hurricane days (median is 21.3), 1 major (Category 3-4-5) hurricane (median is 2.0) and 0.5 major hurricane days (median is 3.9). The probability of U.S. major hurricane landfall is estimated to be about 55 percent of the long-period average. We expect Atlantic basin Accumulated Cyclone Energy (ACE) and Net Tropical Cyclone (NTC) activity in 2015 to be approximately 45 percent of their long-term averages.

This forecast is based on an extended-range early April statistical prediction scheme that was developed utilizing 29 years of past data. Analog predictors are also utilized. We anticipate a below-average Atlantic basin hurricane season due to the combination of a high likelihood of at least a moderate El Niño event and a relatively cool tropical Atlantic. Coastal residents are reminded that it only takes one hurricane making landfall to make it an active season for them, and they need to prepare the same for every season, regardless of how much activity is predicted.

R. Frutos  
May 25, 2015