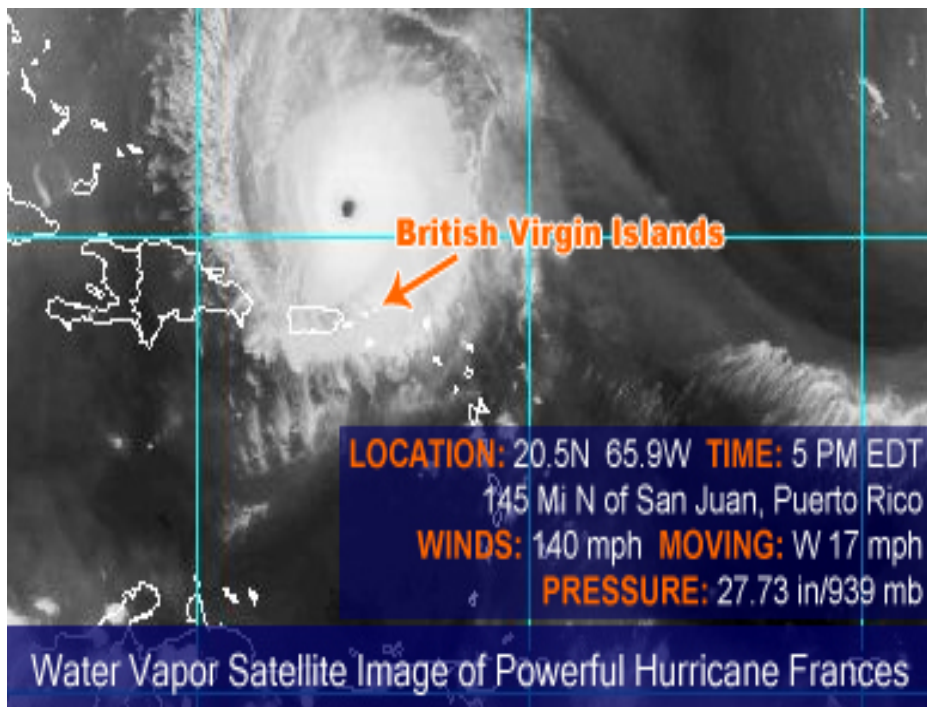


# BRITISH VIRGIN ISLANDS REPORT ON

## HURRICANE FRANCES



(Image provided by [www.bviplatinum.com](http://www.bviplatinum.com))

**PREPARED BY  
THE DEPARTMENT OF DISASTER MANAGEMENT**

## 25<sup>th</sup>-31<sup>st</sup> August, 2004

### EVENT

#### TROPICAL STORM/HURRICANE FRANCES

##### Sequence of Events (25<sup>th</sup> –31<sup>st</sup> August, 2004)

On **Wednesday 25<sup>th</sup>**, DDM issued the first press release on tropical storm Frances at 5pm. At that time the center of the storm was located approximately 1420 miles east of the Lesser Antilles and posed no threat to land. Meteorologists expected Frances to move in a westerly direction, but Frances was tracking more south and might pose a threat to the northeastern Caribbean over the coming week. The staff at DDM continued to monitor the storm and issued advisories on the development of the system.

On **Thursday 26<sup>th</sup>**, the second press release was issued at 10:00 am. Frances was moving toward the west-northwest with near 17mph winds. Meteorologists forecasted that Frances could become a hurricane in the next 24 hrs; they also warned that there was a possibility to strengthen to category three in five days. The threat to the B.V.I would be dependent on the extent of turn in a northwestward direction and for how long. The public was advised at this point to monitor the system in the coming days.

Between Advisory #3 on **Thursday 25<sup>th</sup>** and Advisory #6 at 5pm on **Friday 27<sup>th</sup>**, Frances became a category three hurricane with the possibility of strengthening to category four over the weekend. The position at this time was approximately 800 miles east of the Leeward Islands. Frances was forecast to pass north of the Caribbean but meteorologists warned any deviation south could bring the core of Frances's stronger winds into the northeast islands of the Caribbean. DDM staff alerted the public to listen to further advisories and be prepared should the system track closer. Emergency shelter maps and community preparedness information was published on the national GIS website at

[www.bvingis.gov.vg/about.htm](http://www.bvingis.gov.vg/about.htm) by the National GIS Coordinator, Mr. Mark Hayward. The Zonal Coordinators, the National SUMA Team, and the Disaster Auxiliary Corps were put on alert. Emergency and verification tests were done on the emergency broadcast system, siren and the telecommunications network.

Advisory #7 at 5am on **Saturday 28<sup>th</sup>** to Advisory #12 at 5pm on **Sunday 29<sup>th</sup>** saw hurricane Frances become a dangerous category three with intense thunderstorms developing around a well developed eye. A tropical storm watch was put into effect at Advisory #12. Frances' projected path throughout the period Advisory #7 to Advisory #12 was forecast to pass 100-150 miles to the north of the B.V.I. sometime on **Tuesday 31<sup>st</sup>** in the late morning. Weather models indicated that Frances would continue on a W-WNW motion and then a WNW-NW motion toward southern Florida or the northern Bahamas. Continued slow strengthening was expected over the next several days with the possibility of the system strengthening to a category five hurricane. In the afternoon of **Sunday 29<sup>th</sup>** DDM staff published Advisory #12 on a local website [www.bviplatinum.com](http://www.bviplatinum.com) and continued to publish subsequent advisories. The site was also used to issue press release statements, current satellite and radar images of the storm, photos, hurricane shelter information and other vital statistics. This was seen as a great convenience as members of the public could access the site and free telephone services at the department. The author of the website did this on a voluntary basis and no cost was attached.

On the morning of **Monday 30<sup>th</sup>** a hurricane watch was issued for the B.V.I. Frances continued to move just slightly north of due west and the center was projected to pass 110-130 miles north of the B.V.I. on the afternoon of Tuesday 31<sup>st</sup>. DDM began contacting public agencies to ensure that preparations were in place (*See Appendix I*). The Director of Disaster Management held a meeting with the Governor, Deputy Governor and Chief Minister and briefed them on the status of the system and the preparations put in place. The National Plan was activated at this time and the EOC level was to operate at level one.

Advisory #14 at 11am on Monday 30<sup>th</sup> saw Frances remain on a nearly due west track with forecasters expecting a gradual turn to a west-northwest motion over the next 24hrs. The track was expected to take the center about 120 miles northeast of the B.V.I. Brief tropical storm force winds were expected to affect the B.V.I. In the next 18-36 hrs residents were again encouraged to listen for further advisories and continue preparations. A statement was released to the press confirming the readiness of various agencies. This statement also included information on what type weather to expect on early Tuesday morning such as tropical force winds, rainfall amounts of 1 to 2 inches, tides of 1 to 3 feet and high swells.

On the afternoon of Monday 30<sup>th</sup> August, systems were in place to keep the office open throughout the night. A two-shift system was put into operation. The first shift was from 4:30 pm to 11:00 pm and the second shift was from 11:00 pm to 5:00 am or later. Staff continued to monitor the system and answer calls from the public.

At 5pm on Monday 30<sup>th</sup>, Frances was located near 19.5 north and longitude 60.0 west about 220 miles east northeast of the Leeward Islands. Satellite imagery indicated that Frances had strengthened during the day and was expected to regain category 4 strength. The center was projected to track 80-100 miles north of the B.V.I on Tuesday afternoon.

Future weather predictions expected were the same as those of Advisory #14. A small craft advisory was put into effect as well as a coastal flood watch. Residents of Anegada were alerted to the

possibility that they could experience full tropical storm conditions and should prepare accordingly. DDM staff then continued to make staff preparations for 24hr monitoring of Frances.

At 8 pm on Monday 30<sup>th</sup> Advisory #16 located the center at 19.6 north and longitude 60.7 at about approximately 190 miles east of the northern Leeward Islands. Frances was then moving at 14 mph and this general motion was expected in the next 24 hrs. The latest forecast track would bring the center of Frances 80-100 miles north of the B.V.I. on Tuesday afternoon. The B.V.I. were expected to experience 25 mph winds and tropical storm force gusts of more than 39 mph as early as 5am until late evening. Rainfall amounts of 1-3 inches with isolated totals of 3-5 inches are possible. Tidal increases of 1-3 ft on the northern sides of most islands are expected with large swells in exposed areas. Small craft advisory and coastal watches are still in effect. Anegada residents were asked to pay special attention to advisories as the conditions forecasted for the island has not changed.

At 8 am on **Tuesday 31<sup>st</sup>**, Advisory #16 was issued and the center of Frances was located at near latitude 20.0 north and longitude 63.4 west at approximately 200 miles east-northeast of San Juan, Puerto Rico. The core of Frances was forecast to pass to the north of the northern Leeward Islands and the Virgin Islands with outer bands affecting the B.V.I later in the day. The center was expected to pass 135 miles north of the Virgin Islands in the afternoon with sustained tropical storm force winds to the north of the islands with the possibility of a few wind gusts to tropical storm force in some of the outer squalls. Small craft were instructed to remain in port. A high surf advisory was in effect as well as a coastal flood watch on all low-lying areas. The DDM also issued sandbags to the BVI Electricity Corporation, Pockwood Pond site. CCT Boatphone assisted the DDM in servicing critical fax facilities, which allowed the public to access advisory information.

Statement #2, which followed Advisory #16, was issued to the press regarding weather conditions previously described, key response agencies and conditions for Anegada. It stated that government offices would remain open throughout the day. Some private enterprises chose to close their offices to business. The Ports Authority would continue to monitor the sea conditions and would advise on any changes in operations based on changing conditions. Some ferry companies cancelled their services to Virgin Gorda and St.Thomas. However, one cruise ship the *Holland America* made a call to port at Road Town. Civil Aviation Authority confirmed that the airport would remain open pending weather conditions. Persons travelling were asked to check with airline companies, as there was a possibility that the airport would be closed in the afternoon. Reports from Anegada stated that they were presently experiencing slight winds and overcast conditions. They were advised to pay particular attention to the system as weather conditions affecting the island could possibly deteriorate later in the day.

At 2pm Advisory #21 was released and a tropical storm warning was still in effect for the B.V.I. The eye of the hurricane was located near latitude 20.3 north and longitude 65.0 west about 140 miles north-northeast of San Juan, Puerto Rico. The core of the hurricane was forecast to pass well to the north of the B.V.I later today. Frances was now a category four hurricane with maximum sustained winds, which have increased to near 140 mph. Small craft advisory and high surf advisory remained in effect with coastal flood watches for all low lying areas. The DDM weather stations recorded rainfall totals of 10.16 mm in the last 24 hours.

At 5pm Advisory #22 was issued. The location of the eye was latitude 20.5 north and longitude 65.9 west and its projected path did not pose a threat to the B.V.I. At 6:00 pm the website being used to issue advisories and information registered 23,153 hits to the site since the weather information was placed on it. Civil Aviation and Ports Authority did not close the airport or the ports. Rainfall measured at the DDM weather station site recorded on the 31<sup>st</sup> August from 1am to 5pm measured a total of 16.7

mm. The majority of rain fell between the period 1 pm to 3 pm and was measured at a total of 15.6 mm. The DDM officially ceased operations at 7 pm. The tropical storm warning was discontinued and the DDM staff looked forward to a restful night.

### **AREAS FOR IMPROVEMENT**

- Individuals and families need to view disaster preparations as a precautionary measure and not as a response activity
- The Deputy Governor's Office shall be tasked with developing protocols on the closure of non-essential Government offices and permission for staff to stay at home
- An interactive website managed by DDM should be created to provide for timely dissemination/access of emergency public information
- An additional fax should be made available to the DDM in the event of emergencies to allow them to receive and send faxes simultaneously
- The Facilities Department in conjunction with the Deputy Governor's Office should be tasked with ensuring bulletins and advisories are posted at strategic locations where they can be accessed by public officers
- Government through the Radio Licensing Unit should ensure that provisions are contained in broadcast licenses for testing and broadcasting of the Emergency Alert System
- Persons issued with DDM VHF radios should take part in the daily radio checks to ensure that radios are operational
- Attention should be paid to unstable slopes and hillsides to protect motorists from falling rocks and debris\*\* (who is to do this?)
- Government departments should allocate funding for emergency supplies for response within their respective budgets, since the emergency supplies stored by DDM are for community response\*\* (not too clear)

## Appendix 1

### Public Agency Response Actions

#### **Tourist Board**

- Sent out letters to all hotels letting them know what precautions to take.
- They are also calling all hotels informing them about the hurricane watch which is in effect for the BVI.
- Most of the hotels are putting in place all procedures in their disaster plans.
- All marinas have been contacted.
- They are awaiting the next press release.

#### **Water & Sewerage**

- Making sure that trucks and tractors (backhoes) have fuel and are in working condition.
- Generators are being serviced and are in working condition.
- Reservoirs all around the BVI are being filled.
- All office equipment was covered with plastic and tarpaulin.

#### **Conservation & Fisheries Department**

- Sent out an advisory for fishermen.

#### **Civil Aviation**

- Staff is prepared to take all precautionary measures such as lowering of antennas, equipment and loose materials.
- Do not intend to shut the airport but will monitor the situation.
- If sustained winds reach 35 knots then the airport will be closed.

#### **BVI Ports Authority**

- Taking Preliminary Preparations.
- Still waiting further advice from DDM.

#### **National Parks Trust**

- They are assuming that a hurricane will hit and they are deploying all staff with regards to their contingency plan.
- Securing all Boats, Marine & Nature Reserves on all the BVI.

#### **Public Works Department**

- Clearing drains from since the month of June.
- Employees on standby.
- All equipments are in a state of readiness and all vehicles fuelled.

#### **BVI Electricity**

- All employees have been alerted and are on standby.
- If winds are 50 mph or more the electricity system will be shut down as a precautionary measure.

**Health**

- Environmental Health Department was contacted to verify readiness and response if necessary.
- Health clinics were contacted and made aware of the status of the system.
- Those health clinics that were vulnerable to flooding were checked to verify that sandbags were available.

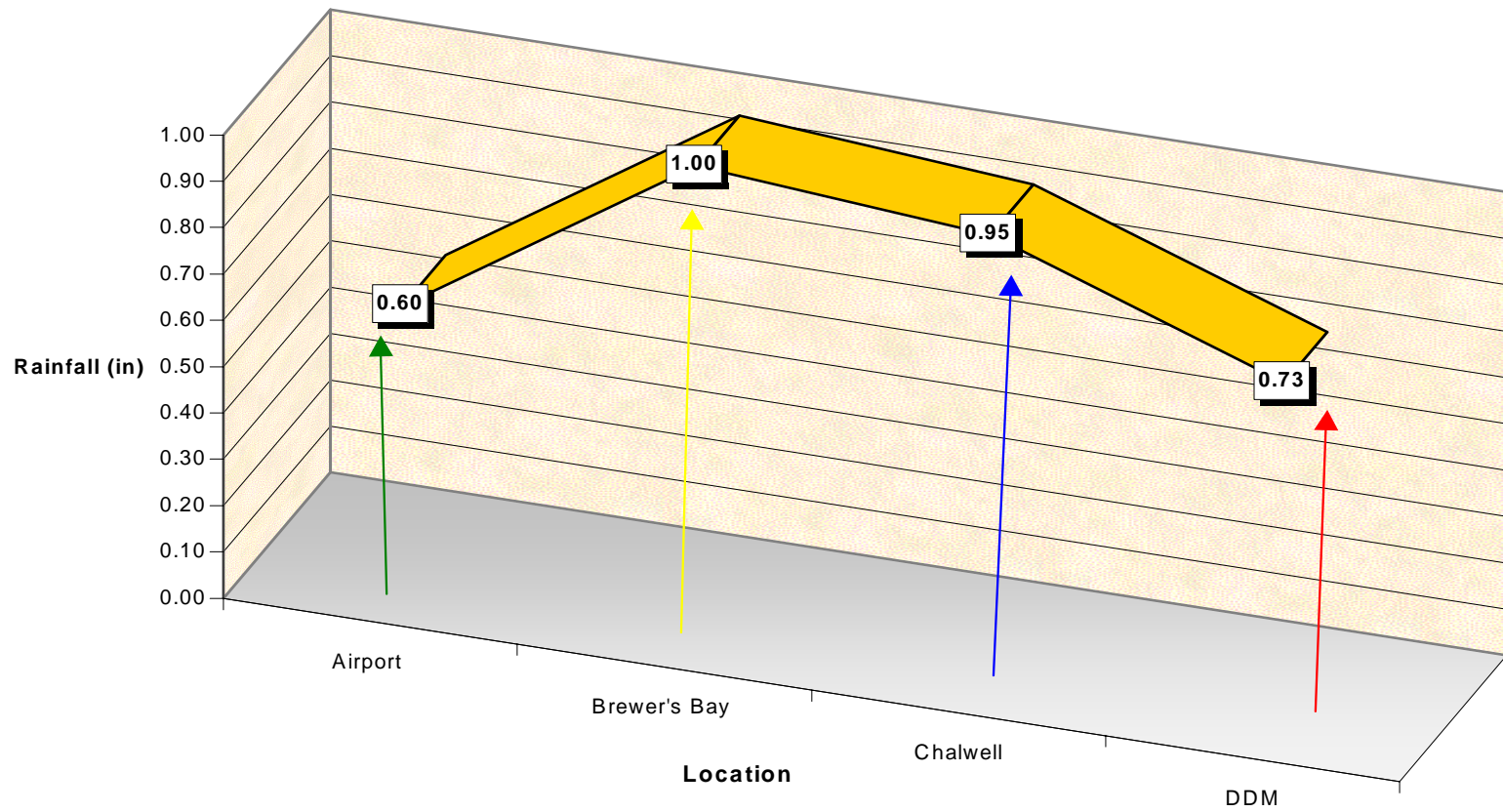
**DDM**

- Zonal Coordinators, Sister Island's District Officers, SUMA Team, and the Disaster Auxiliary Corps were kept abreast of the situation.
- Shelter managers were put on alert.
- Emergency shelters were checked for readiness.
- Hurricane shutters were erected by the Fire and Rescue Service at the Sea Cow's Bay Community Centre due to its proximity to the open water.



## Appendix 2

Rainfall measured during the passage of Hurricane Frances



### Appendix 3

Wind speed measured during the passage of Hurricane Frances

