

Activity: Track of Hurricane Jeanne

After completing this exercise, you should be able to:

- describe how a hurricane can be tracked.
- observe the unpredictable path of a hurricane.
- use the track of a hurricane to plan a disaster relief program.

The map provided shows an area of the Atlantic Ocean and Caribbean Sea off the East Coast of North America. Use the map to track the path of Hurricane Jeanne from the positions given in the accompanying table. Each position shows the center of the storm for the time indicated in the table. These positions are given as latitude and longitude. Longitude advances toward the left (west) and latitude advances upward (north). Begin by plotting the positions number 1 to 5 from the table. Connect these points with line segments. Answer the questions below at that point.

Hurricane Jeanne, 13 – 28 September 2004

Date	Time (UTC)	Position #	N. Latitude	W. Longitude	Wind Speed (kt)	Stage
9/13	1800	1	15.9	60.0	25	TD
9/14	1200	2	16.7	63.5	50	TS
9/15	1800	3	18.1	66.2	60	TS
9/17	0600	4	19.4	69.9	55	TS
9/18	0600	5	20.4	72.5	45	TS

9/18	1200	6	21.2	72.8	45	TS

9/19	1800	7	24.2	72.3	45	TS
9/20	1800	8	27.2	71.4	75	H

9/22	0000	9	27.2	68.9	80	H

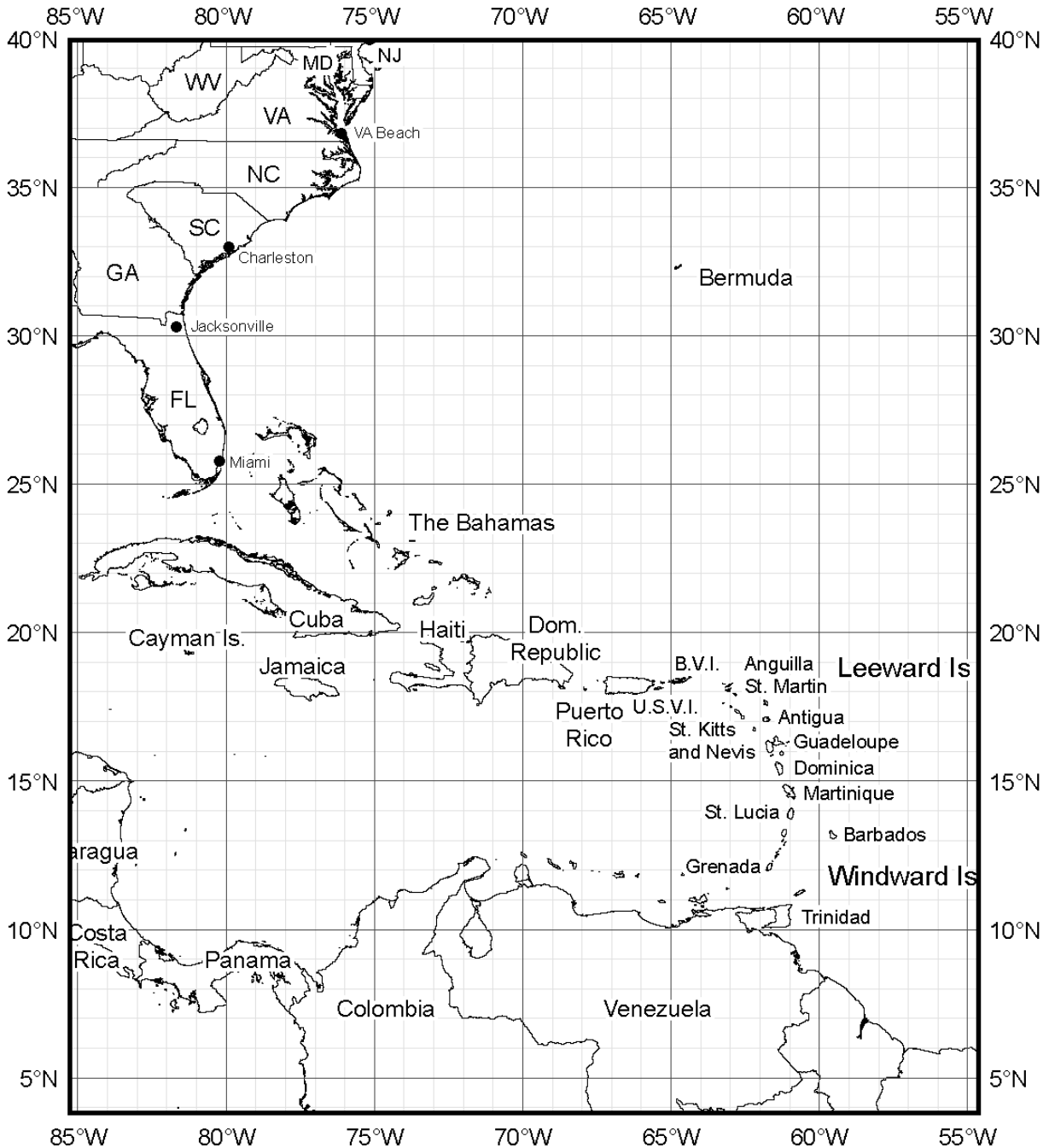
9/23	0000	10	25.7	69.0	85	H

9/24	0000	11	26.0	70.4	70	H

9/24	1200	12	26.2	72.2	80	H

9/26	0000	13	27.1	79.4	105	H
9/26	0600	14	27.3	80.6	95	H

UTC is Universal Time Coordinated, 4 hours ahead of local Atlantic Standard Time.



(Adapted from the Atlantic Basin Hurricane Tracking Chart, NHC,
http://www.nhc.noaa.gov/tracking_charts.shtml)

1. If you were a meteorologist, what would you tell people living in the immediate area? What about the people in Florida? What is the anticipated landfall point for the U.S. mainland? When might that occur?
2. If you were in charge of emergency management for the area to the west of the storm's position, what action would you take, if any? Consider that it will take

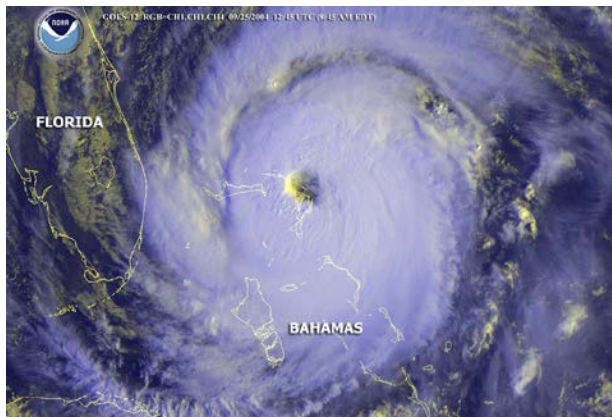
several hours to alert people in your exposed areas and allow them to evacuate, if needed. (The more people who at risk, the more time it will take to move them, and the time of day should be considered.)

3. What types of emergency personnel and supplies will be needed if widespread damage occurs?

Next, continue to plot point 6 and connect to the path. Consider the questions again, are any changes needed?

Plot 7, 8 and consider the questions. Then plot 9 and consider the questions. Follow with point 10, then point 11, finally point 12 considering if the answers you have given to the questions need to be reconsidered. Lastly, plot points 13 and 14. How did your track and time projections work out?

Jeanne formed from a tropical wave off Africa on 7 September. The wave slowly strengthened to a tropical depression and then storm by 14 September. As Jeanne moved over Haiti, the heavy rains caused mudslides that claimed the lives of 3,000 people and washed away 200,000 homes. In the U.S. 4 deaths were directly caused by Jeanne along with property losses of 6.9 billion dollars. That year, Jeanne was one of three hurricanes to cross central Florida within one month.



Hurricane Jeanne (NOAA)



2004 central Florida hurricane tracks (USGS)

Additional Activities:

- a. When a tropical storm or hurricane is reported, monitor radio and television for information on the storm's progress. Plot the position of the storm's center on a classroom map or tracking chart. Also mark the coastline along which hurricane watches and warnings have been issued. For more information, see <http://www.nhc.noaa.gov>.
- b. Invite persons who have lived through hurricanes to speak about their experiences to the class.
- c. What can individuals, families, and communities in coastal areas do to meet the hurricane threat? If you live in a coastal area, what are the preparedness and response plans of your family and community?
- d. For more information on hurricane and general severe weather preparedness, see <http://www.nws.noaa.gov/com/weatherreadynation/>.