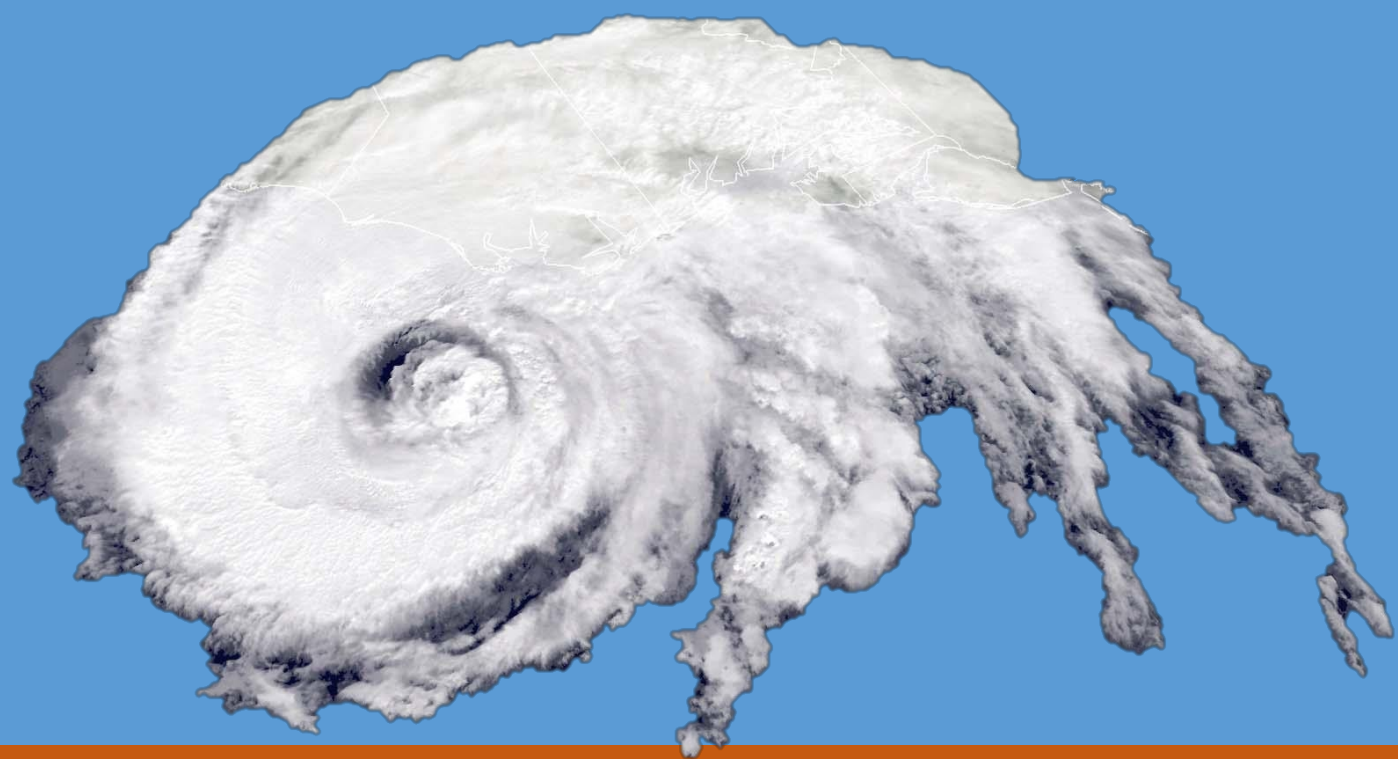


# HURRICANE ISABEL

## Atlantic Coast - 2003



### Overview:

Hurricane Isabel was the deadliest and costliest hurricane of the 2003 season, killing 51 people and incurring more than \$5 billion in damages. Its immense size allowed it to wreak havoc across a large swath of the East Coast, especially Virginia, Maryland and the District of Columbia. The storm surge reached levels as high as 9.5 feet on rivers that flow into the Chesapeake Bay across Virginia, Maryland, Delaware, and D.C. The National Weather Service (NWS) named it among the top most significant hurricanes to hit the region since the devastating Chesapeake-Potomac hurricane in 1933.

### Meteorology:

On September 6, 1500 miles off the Senegalese coast, Isabel became the ninth of sixteen named tropical storms of the 2003 season. After quickly strengthening to a Category 5 (>155 mph winds), the storm remained above a Category 3 until the 16<sup>th</sup>.

Quick Facts:

U.S. landfall date:

September 18, 2003

Max wind speed:

165 mph

Category 5 duration:

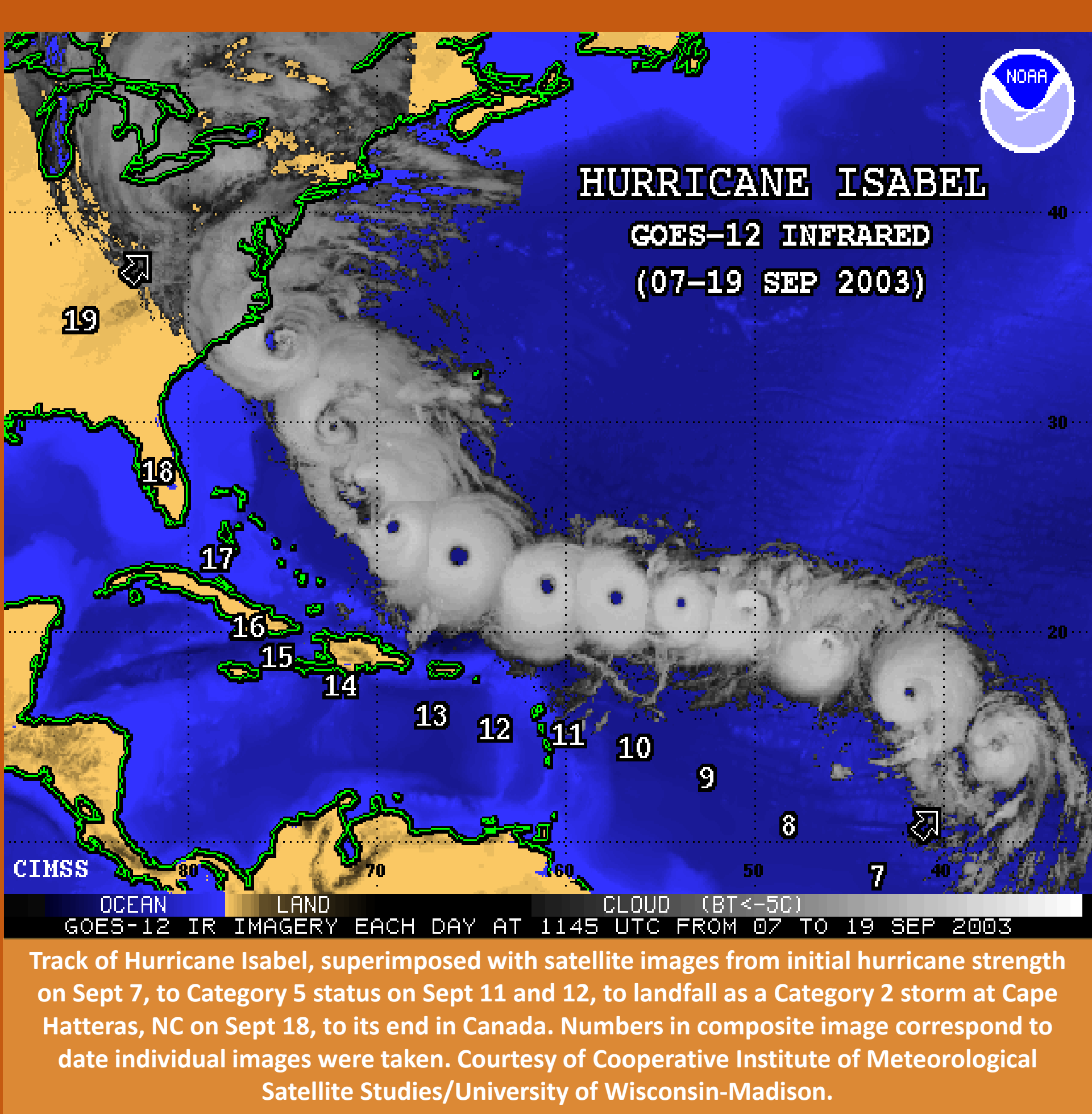
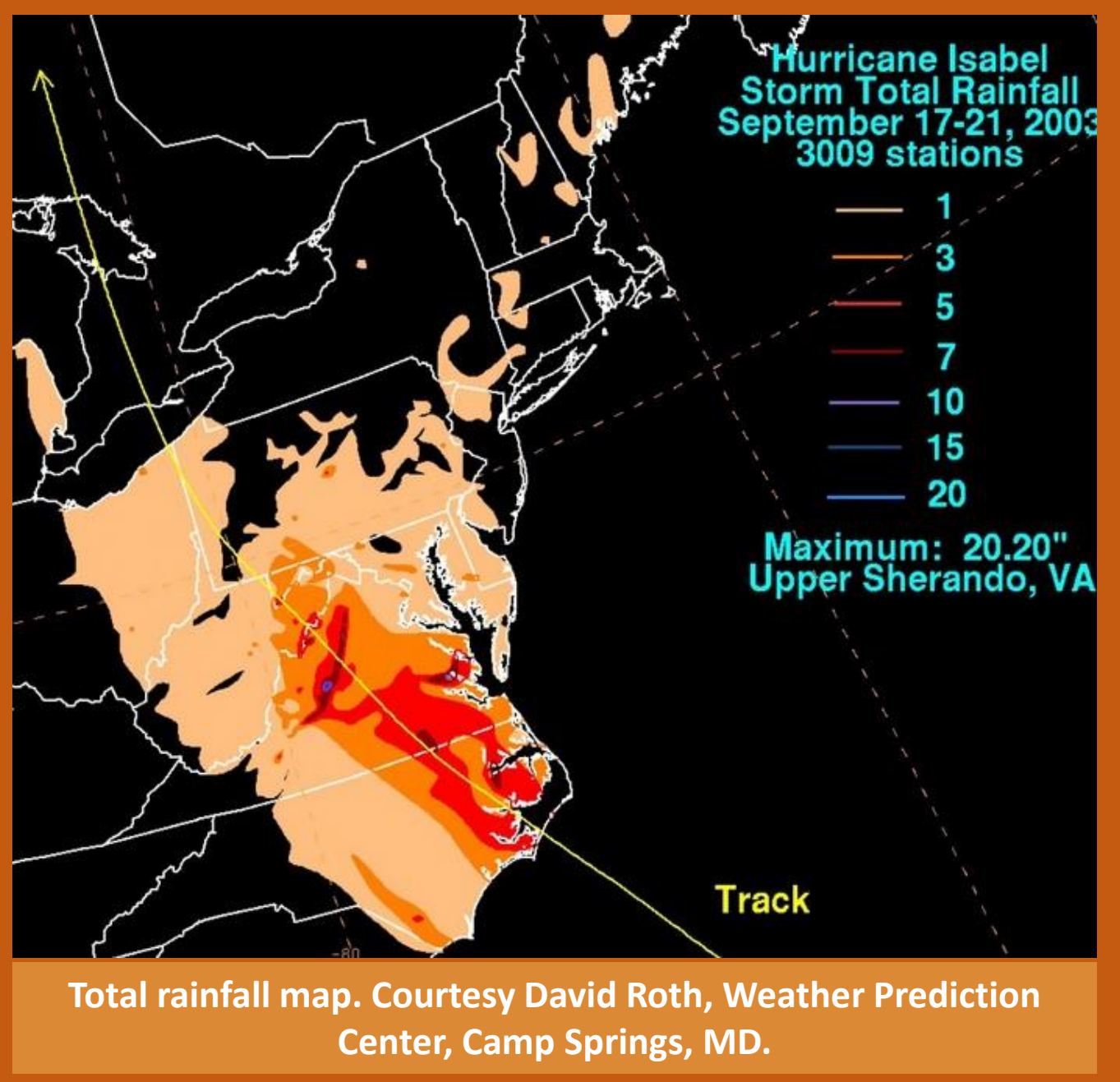
36 hrs

Minimum pressure:

915 mb

Max total rainfall:

20.20 in



Landfall of the storm coincided with high tide, which increased the effects of the storm surge. This, along with rainfall deposited into the Chesapeake Bay watershed reaching 20 inches resulted in widespread, intense flooding.

Saffir-Simpson Scale			
Category	Wind (mph)	Pressure (inches)	Surge (feet)
1	74-95	> 28.94	4 - 5
2	96-110	28.50-28.93	6 - 8
3	111-130	27.91-28.49	9 - 12
4	131-155	27.17-27.90	13 - 18
5	> 155	< 27.16	> 18



*“The response to this hurricane has been really great. The planning for it has been great, the response during the hurricane was great, and the response after the hurricane has been great.”*

– Pres. George Bush

*“A bunch of houses pretty much lost everything. I’ve been through five hurricanes, but this is the first time I’ve seen houses destroyed.”*

– Floyd Bullock, Volunteer Firefighter

### Impact:

Although the storm was well-predicted, major damage still occurred. Many cities were flooded, and some power outages lasted for weeks.

- Over \$5 billion in damage
  - Areas flooded up to 9.5 ft
  - 15 million people lost power
  - 17 direct deaths due to drowning, fallen trees, etc.
  - 42 indirect deaths due to car
- crashes, power loss, cleanup activities, etc.
  - States affected: FL, NJ, MD, PA, VA, RI, NC, D.C.



Aerial photos of Cape Hatteras seashore before Hurricane Isabel (left), just afterward with the road missing (middle), and 10 years later with the road repaired (right). Red arrows point to corresponding locations. The road, Highway 12 (red line), was the only access to mainland for the ~200 residents of Hatteras Village, NC. Images courtesy NOAA Report “Hurricane Isabel Damage Assessment at Cape Hatteras” and Google Earth.



Flooding near Jefferson Memorial, Washington, D.C. Courtesy of Associated Press.



Storm surge flooding in Baltimore, MD. Courtesy of Maryland Historical Trust.



Pete White uses his boat in flood waters in Washington, DC. Courtesy of Baltimore Sun.