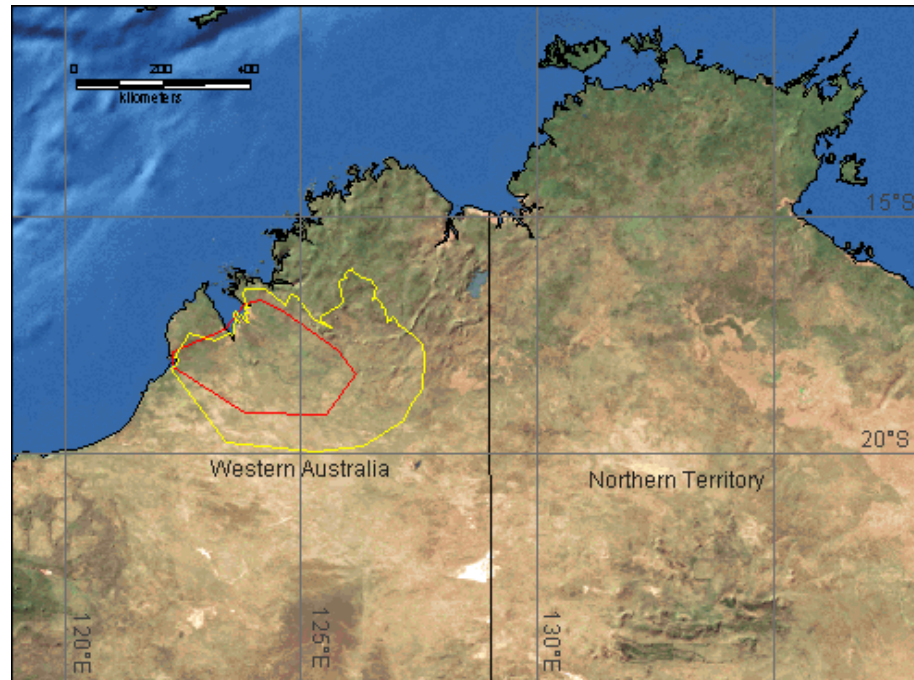


Dartmouth Flood Observatory Flood Analysis Report 2003-062

Event:	DFO-2003-062, W. Australia	Previous Events:	DFO-2002-033
Duration:	March 2 -11, 2003, 10 days	News Notes:	No news reports.
Cause	7, Heavy rains from tropical cyclone Graham, Feb 27 - March 1.	Locations:	From DFO remote sensing: Fitzroy River in Western Australia
Region Affected:	68,630 sq. km	Watershed:	159,200 sq. km; Fitzroy River
Severity:	1, large	GIS vectors	20030700205Fitz062M2.24; 20030640525Fitz062Ma2.40; 20030630200Fitz062M2.31
Magnitude:	6.0		

Figure 1. Location of contributing watershed (yellow line) and area affected by flooding (red line)



Causation categories are: 1, thunderstorm; 2, precipitation band; 3, squall line; 4, stationary front; 5, mesoscale convective complex; 6, convective cloud cluster; 7, tropical cyclone; 8, extra-tropical cyclone; 9, stationary synoptic front; 10, ITCZ wave disturbance; 11, snowmelt; 12, rain and snowmelt; 13, ice jam or ice break-up; 14, dam break; 15, avalanche.

Severity classes: 1, large, 20%-5% exceedance probability – and/or significant damage to structures or agriculture; 2, very large, 5%-1%; 3, extreme, <1%.

Flood Magnitude: {Natural Log duration (days)} x {severity class} x {sq rt region affected (sq. km)} x .01.

Duration, region affected, and intensity are estimates from news and government reports.

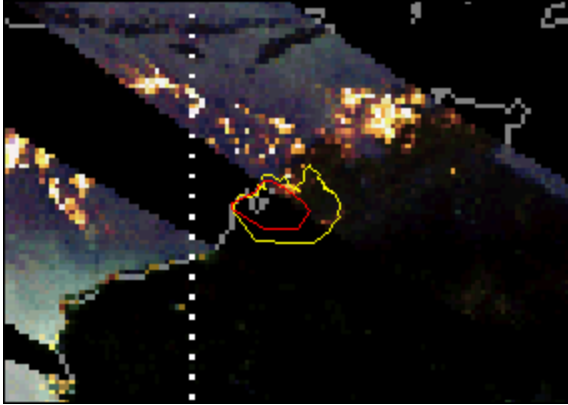
Work supported by: the NASA Office of Earth Science and by the Dartmouth College Geography Department, Hanover NH 03755 USA

Citation for this publication: Anderson, E. and Brakenridge, G.R., 2003, Dartmouth Flood Observatory Flood Analysis Report 2003-062, p1-4, online at <http://www.dartmouth.edu/~floods/2003062.pdf>

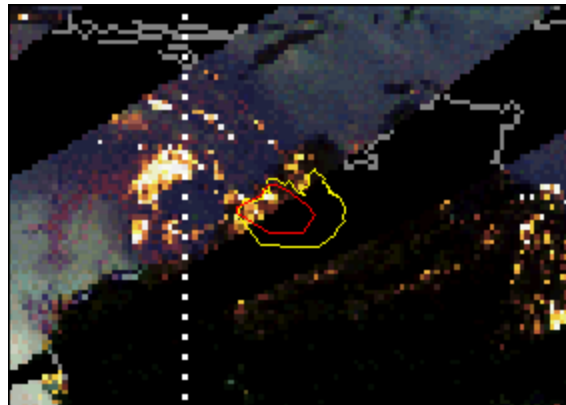
Dartmouth Flood Observatory Flood Analysis Report 2003-062

Figure 2. NASA/NASDA Tropical Rainfall Measurement Mission (TRMM) daily rainfall (“Quicklook”) data for the flood-generating storm. Images are from the TRMM home page at: http://trmm.gsfc.nasa.gov/data/quicklook/last_2_cal.html.

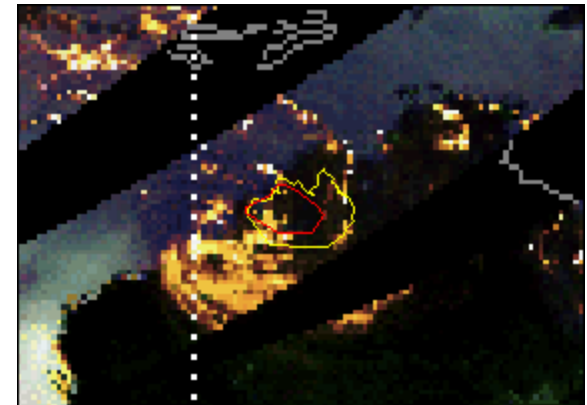
February 26, 2003



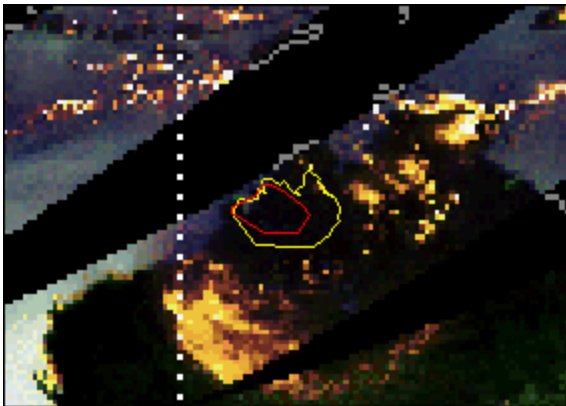
February 27, 2003



February 28, 2003



March 1, 2003



March 2, 2003



Tropical storm Graham produced heavy rainfall in Western Australia beginning February 27. The storm remained relatively stationary and weakened by March 2. TRMM data show rainfall had ended by March 3.

**Dartmouth Flood Observatory
Flood Analysis Report 2003-062**

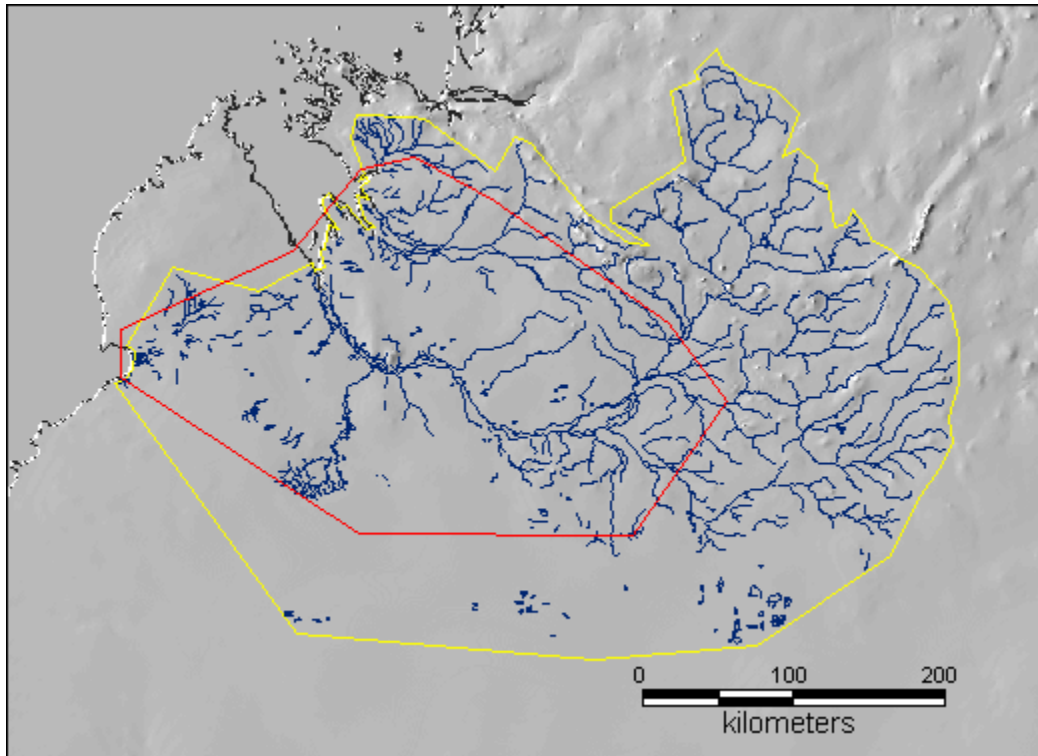







Figure 3. Flood-generating watershed for this flood event.


DFO event # 2003-062


Area affected 

MODIS flood inundation limit

- March 11, 2003 
- March 5, 2003 
- March 4, 2003 

MODIS data cloud free area
March 11, 2003 

Flooded Lands in: 2002 

MODIS reference water 

Main city 

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Elaine Anderson
Sébastien Caquard
Work supported by
NASA grant NAG5-9470

Universal Transverse Mercator
UTM Zone 52 South; WGS 84
Graticule: 2 degrees

