

A focus on the Fitzroy in Flood 2011

Significant time and resources have been invested by companies, researchers and management agencies to gain a better understanding about how major flood events affect the health of our catchment and coastal ecosystems

Catchment Monitoring

Hydrographical network monitoring

Network of gauging stations for the Fitzroy Basin

Contact: Peter Voltz (DERM)

GBR I5 load monitoring

Event based monitoring on the Fitzroy's major rivers

Contact: Bob Packett (DERM)

Paddock and catchment monitoring

Event based paddock and catchment monitoring on catchments

Contact: Tim Murphy (DERM)

Catchment scale event monitoring

Event based water quality monitoring by landholders

Contact: Luke Ukkola (FBA)

Dry Season Groundcover monitoring

Remote sensing of groundcover leading up to the event

Contact: Christian Witte (DERM)

Storage monitoring

Monitoring associated with storages across Fitzroy Basin

Contact: Neville Wegandt (Sunwater) and Jason Plumb (RRC)

Catchment Modelling

Pollutant load modelling from catchment to the Fitzroy River Barrage

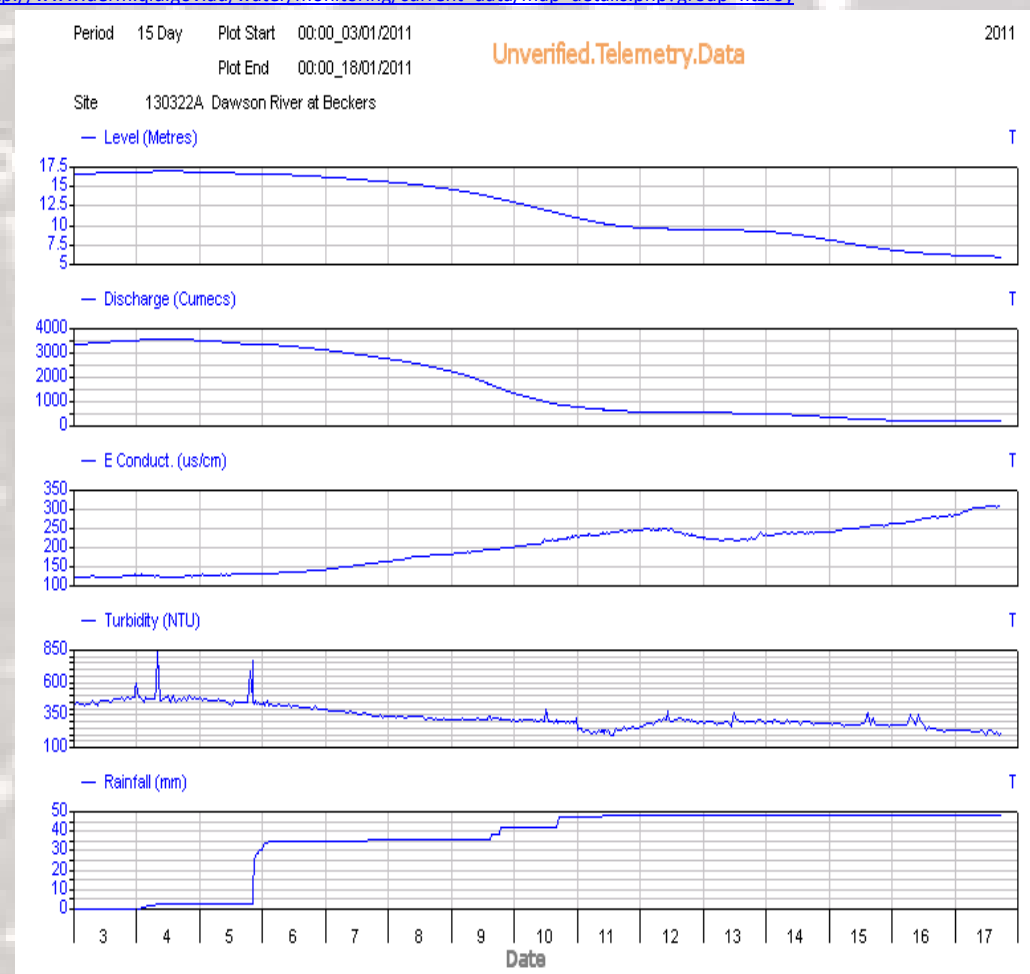
Contact: Cameron Dougall (DERM)

Hydrographical Network

The Department of Environment and Resource Management (DERM) manage a comprehensive monitoring network across the Fitzroy. Water level and discharge is measured at most sites with Electrical Conductivity and Turbidity measured at some sites.

Unverified data is available at:

http://www.derm.qld.gov.au/water/monitoring/current_data/map_details.php?group=fitzroy



Dawson River at Beckers Crossing – Source DERM

Abandoned mines monitoring

Monitoring of water quality on the Dee River

Contact: Sam Pegg (DEEDI)

Regional council monitoring

Source water monitoring for town supplies

Contact: Jason Plumb (RRC), Kate Johnson (BSC), Gert Nel (IRC), Dan Pymble (CHRC)

Stanwell Corporation monitoring

Monitoring of Neerkol Creek

Contact: Kevin Swanepoel (Stanwell)

Mining company monitoring

Water quality monitoring at upstream and downstream sites for 30+ mines

Contact: Environmental Managers at Anglo, BMA, Aquila, Cockatoo, Ensham, Yancoal, Jellinbah, Macarthur, Peabody, Rio Tinto, Vale, Wesfarmers, Xstrata

Santos monitoring

Event and ambient monitoring in the Upper Dawson

Contact: David Macfarlane (Santos)

Estuarine Monitoring

Fitzroy estuary monitoring

Monthly monitoring on the Fitzroy River estuary

Contact: John Ferris (DERM)

Barramundi Recruitment

Long term impact of flooding on recruitment of barramundi.

Contact Bill Sawynock (CapReef)

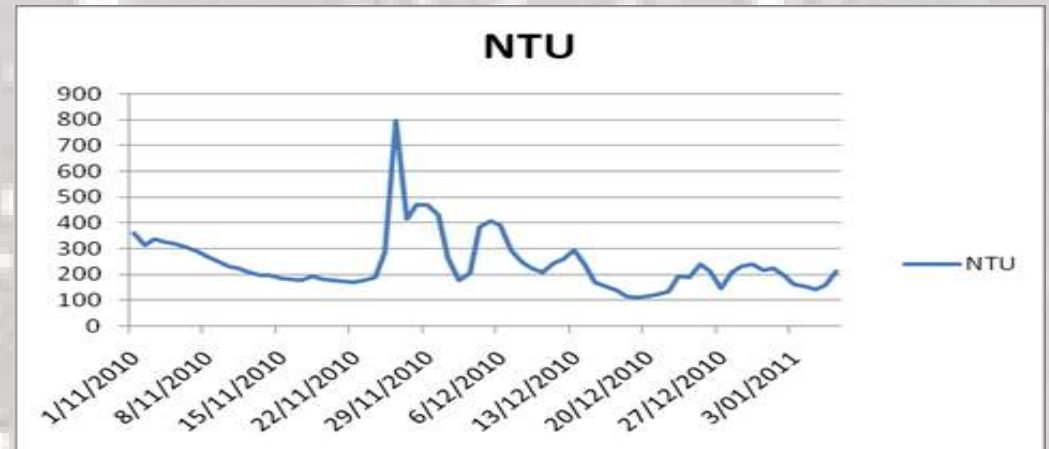
Snubfin dolphin monitoring

Monitoring presence of cetaceans in Fitzroy River Estuary and Keppel Bay

Contact: Danielle Cagnazzi (CQU)

Rockhampton Regional Council (RRC) Source Water Monitoring

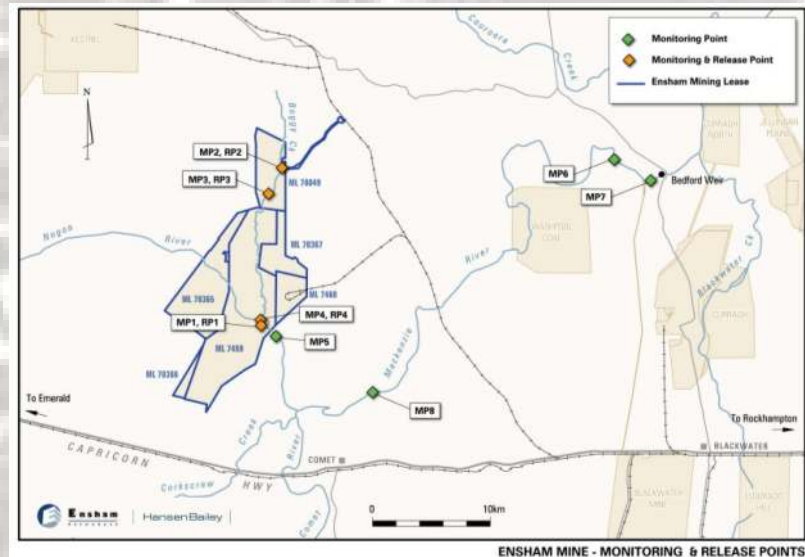
All regional councils including RRC test the raw water before it is treated and used as drinking water supplies. RRC monitor various water quality parameters at several sites across the Fitzroy. Preliminary results for turbidity (expressed as NTU) in the Fitzroy River at Glenmore are provided below.



Ensham Resources results on the Web

Ensham Resources is an independent innovative coal miner with an operation near the junction of the Comet and Nogoia Rivers. All coal mines operating in the Fitzroy Basin test water quality both upstream and downstream of their operations. Ensham has made water quality monitoring data from the latest event publically available at:

<http://www.ensham.com.au/tep/>



Marine Monitoring

Seagrass monitoring

Monitoring the health of seagrass found at Keppel Island and Shoalwater Bay
Contact Len Mckenzie (DEEDI)

Temperature and bleaching

Measuring the links between water quality and coral bleaching
Contact: Ray Berkelmans (AIMS) or Alison Jones (CQU)

Coral and water quality monitoring

Coral and automated water quality monitoring
Contact: Britta Schaffelke (AIMS)

Flood plume mapping and modelling

Remote sensing used to model extent of flood plume
Contact: Arnold Dekker (CSIRO)

Reef resilience monitoring

Pesticide monitoring around the Keppels using passive samplers
Contact: Karen Kennedy (EnTox)

Integrated Marine Observation System (IMOS)

Automated marine monitoring stations in the Capricorn Bunker and Swains Reefs
Contact: Craig Steinberg (AIMS)

Friends of the Keppels monitoring

Community monitoring around the Keppel Islands
Contact: Alison Jones (CQU) or Peter Williams (Keppels Dive)

Fisheries monitoring

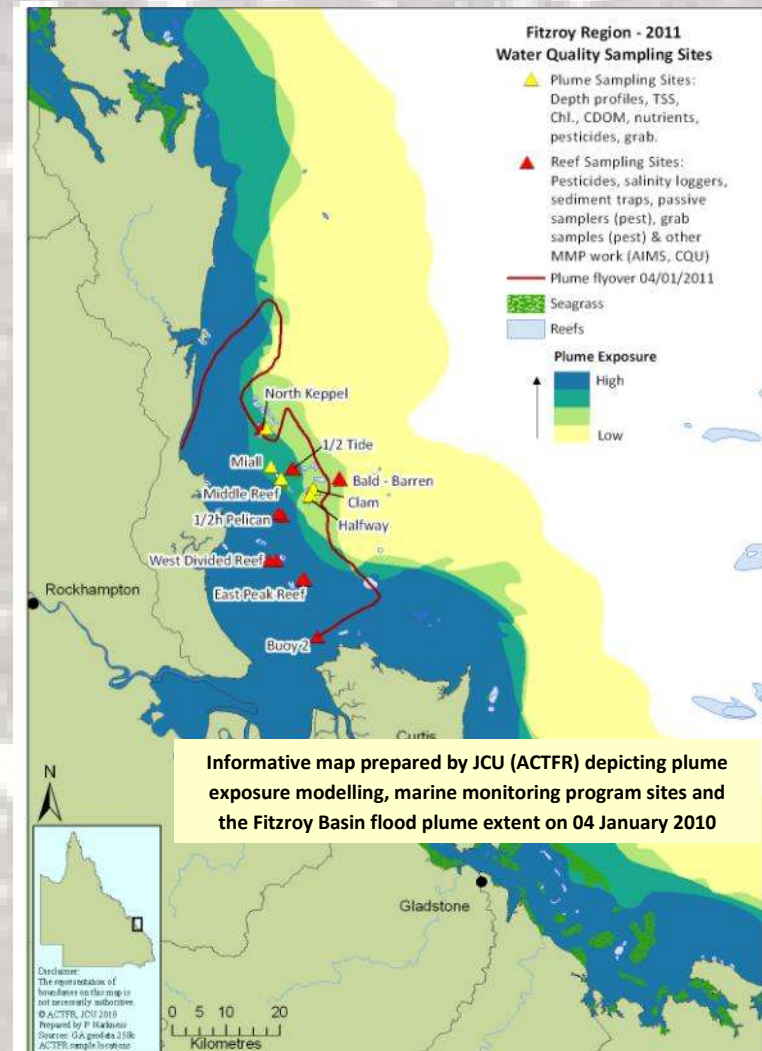
Long term impact of flooding on offshore recreational fishing catches.
Contact: Bill Sawynock (CapReef)

Marine Modelling

Pollutant load modelling from the Fitzroy River Barrage to outer GBR
Contact: Barbara Robson (CSIRO)

Australian Government's Reef Rescue Marine Monitoring Program (MMP)

This long-term water quality and ecosystem monitoring program for the Great Barrier Reef (GBR) is designed to assess GBR health and inshore water quality trends. The Great Barrier Reef Marine Park Authority (GBRMPA) works in partnership with the following organisations as part of this program: James Cook University (JCU - ACTFR), Australian Institute of Marine Science (AIMS), Commonwealth Scientific and Industrial Research Organisation (CSIRO) National Research Centre for Environmental Toxicology (EnTox); Fisheries Queensland - Seagrass Watch (DEEDI) and Central Queensland University (CQU). Many projects outlined in this update are supported by this initiative. Contact: Carol Honchin (GBRMPA)



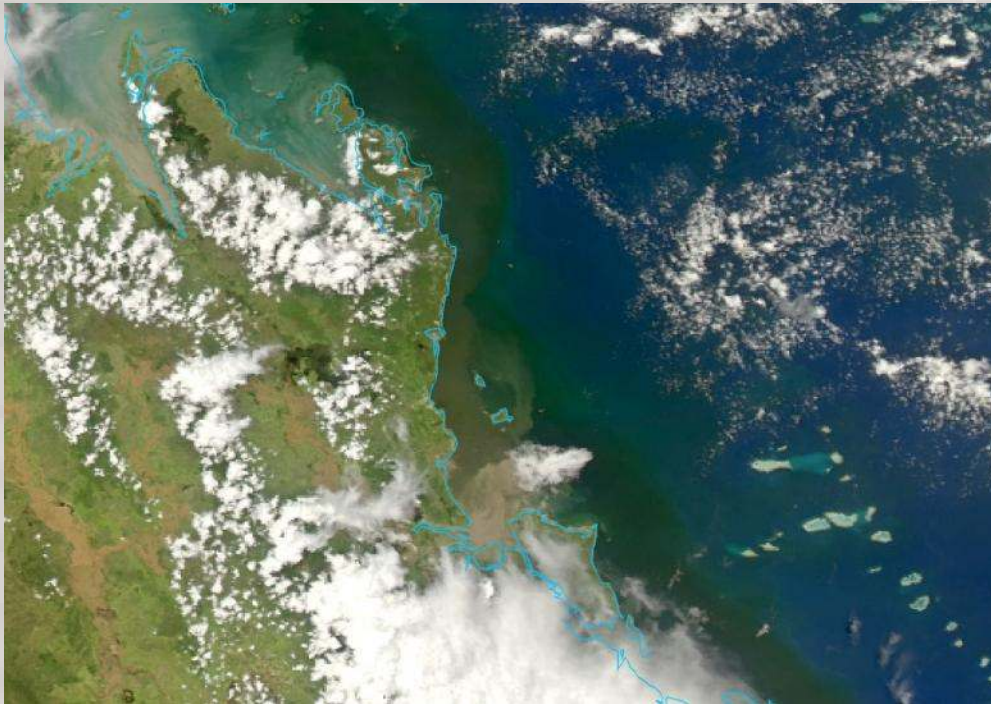
Marine water quality and plume mapping

Water quality and plume monitoring in the Keppel's

Contact: Michelle Devlin (ACTFR) or Dave Orgill (DERM - QPWS)

See the flood plume from space

"Visual assessments from satellite imagery show current sediment laden discharge from the Fitzroy approximately 35kms off the coast. Nutrient laden freshwater is likely to be further out and has already reached the Keppel Islands. Full extents won't be known until event is over" Dr John Platten



Satellite Imagery (NASA) with coastline (DERM)

Prepared by the Fitzroy Partnership for River Health on behalf of organisations monitoring across the Fitzroy Basin

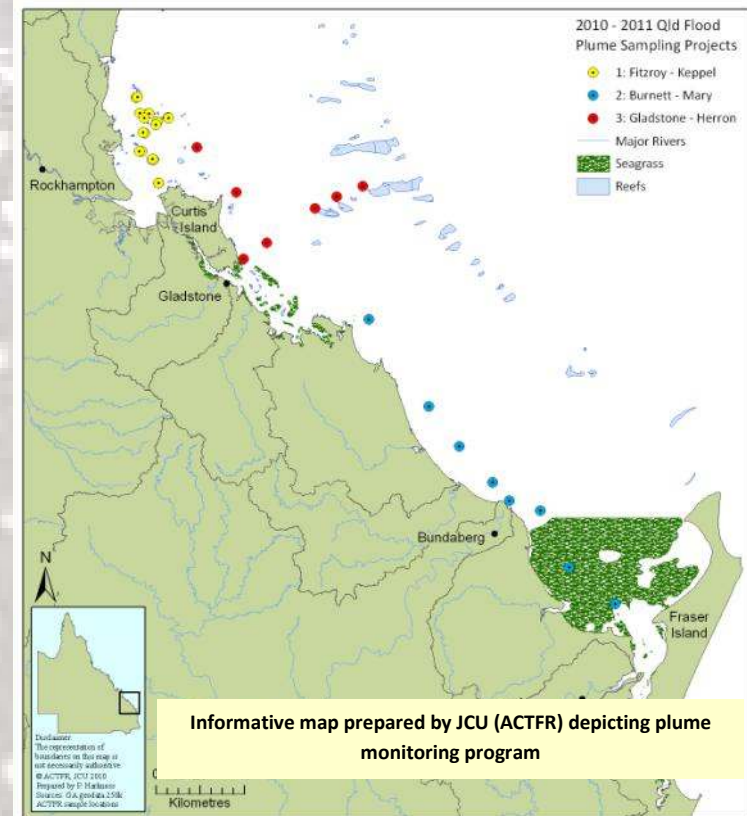
To include details in the next update please contact Nathan.johnston@fba.org.au

fitzroy
partnership
for river health

Update 1: 21 Jan 2011

Marine water quality and plume mapping

Flood plume sampling between Gladstone and Heron Island was completed on the 12th January by ACTFR and QPWS with plans for at least two more runs. One includes outside Keppel Islands from north east of Outer Island down to Cape Capricorn and another from Gladstone to Swain Reefs. Plume sampling is also being conducted in Keppel Bay by Keppels Dive



GBRMPA CQ Flood Fact Sheet

GBRMPA have prepared an informative fact sheet available at:

http://www.gbrmpa.gov.au/data/assets/pdf_file/0010/46828/GBRMPA_CentralQldFlood_Info1_2011.pdf

