

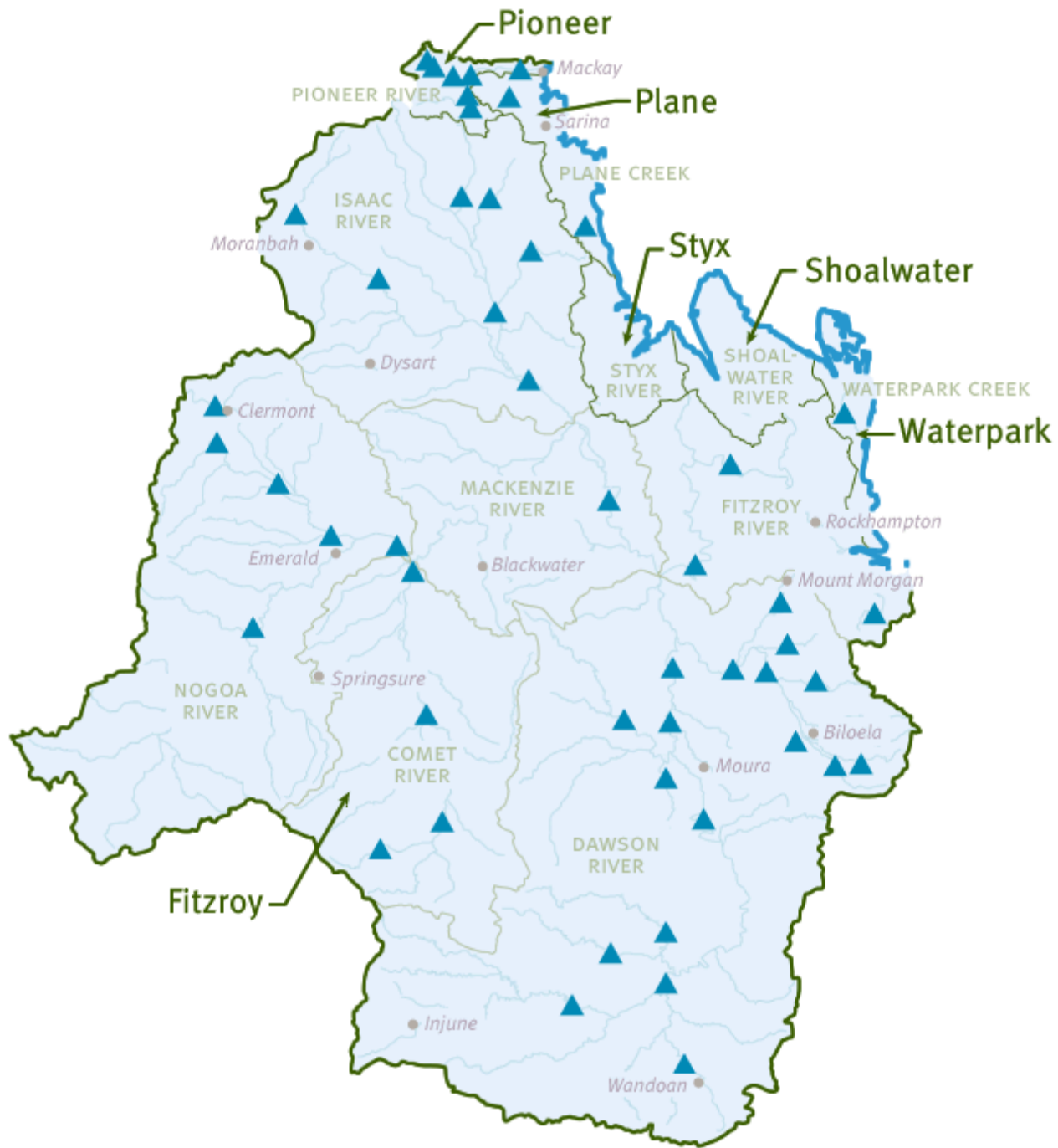
Learnings from Ensham Experience – Water Quality Perspective

Ed Donohue

Regional Manager, Water Services
Central West Region

This talk

- The Department's Gauging Stations
- January 2008 Flood
- Dewatering program
- Impacts – Conductivity
- Impacts – External
- Government Response
- What was Done
- Return to Normal
- Can Levies be built on the floodplain?



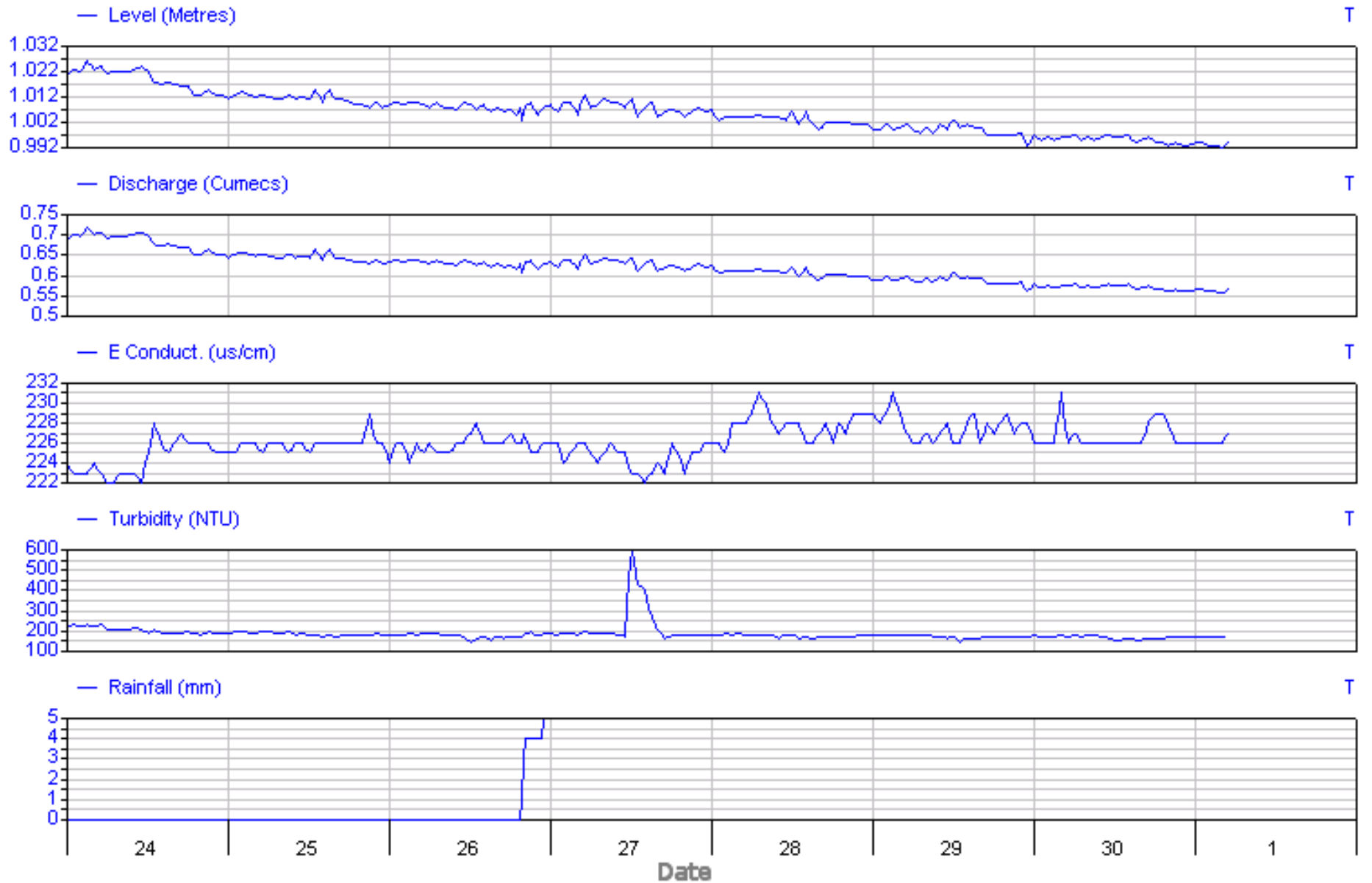
Period 8 Day Plot Start 00:00_24/06/2009

Plot End 00:00_02/07/2009

Unverified Telemetry Data

2009

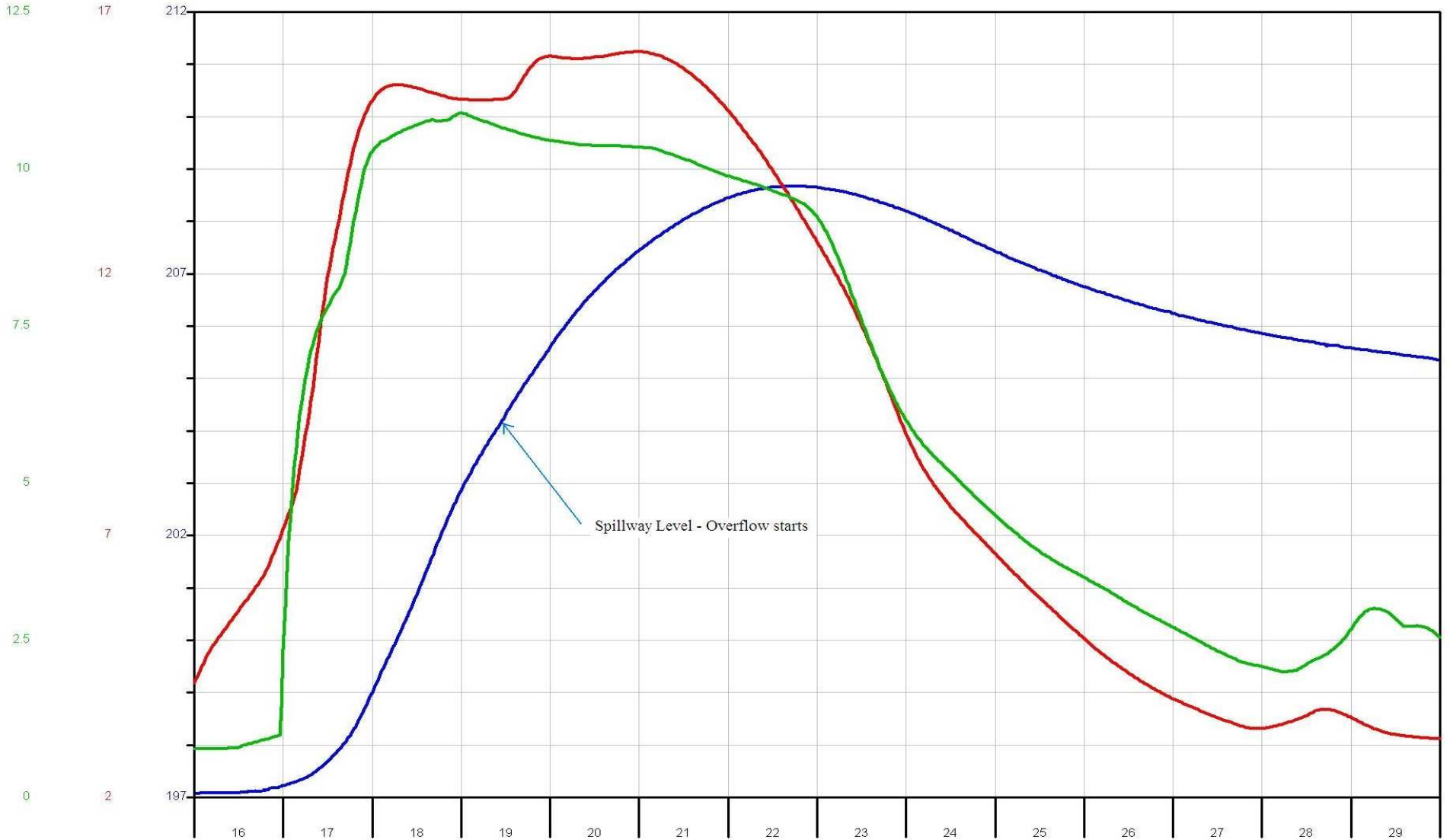
Site 130105A Mackenzie River at Coolmaringa



Qld NRW SWDB

Period 14 Day Plot 16/01/2008 to 30/01/2008

130216A	Nogoa R_Fairbairn	Spillway	Level (Metres)
130209A	Nogoa R_Craigmore	Inflow	Level (Metres)
130206A	Theresa_Gregory Hwy	Highway	Level (Metres)

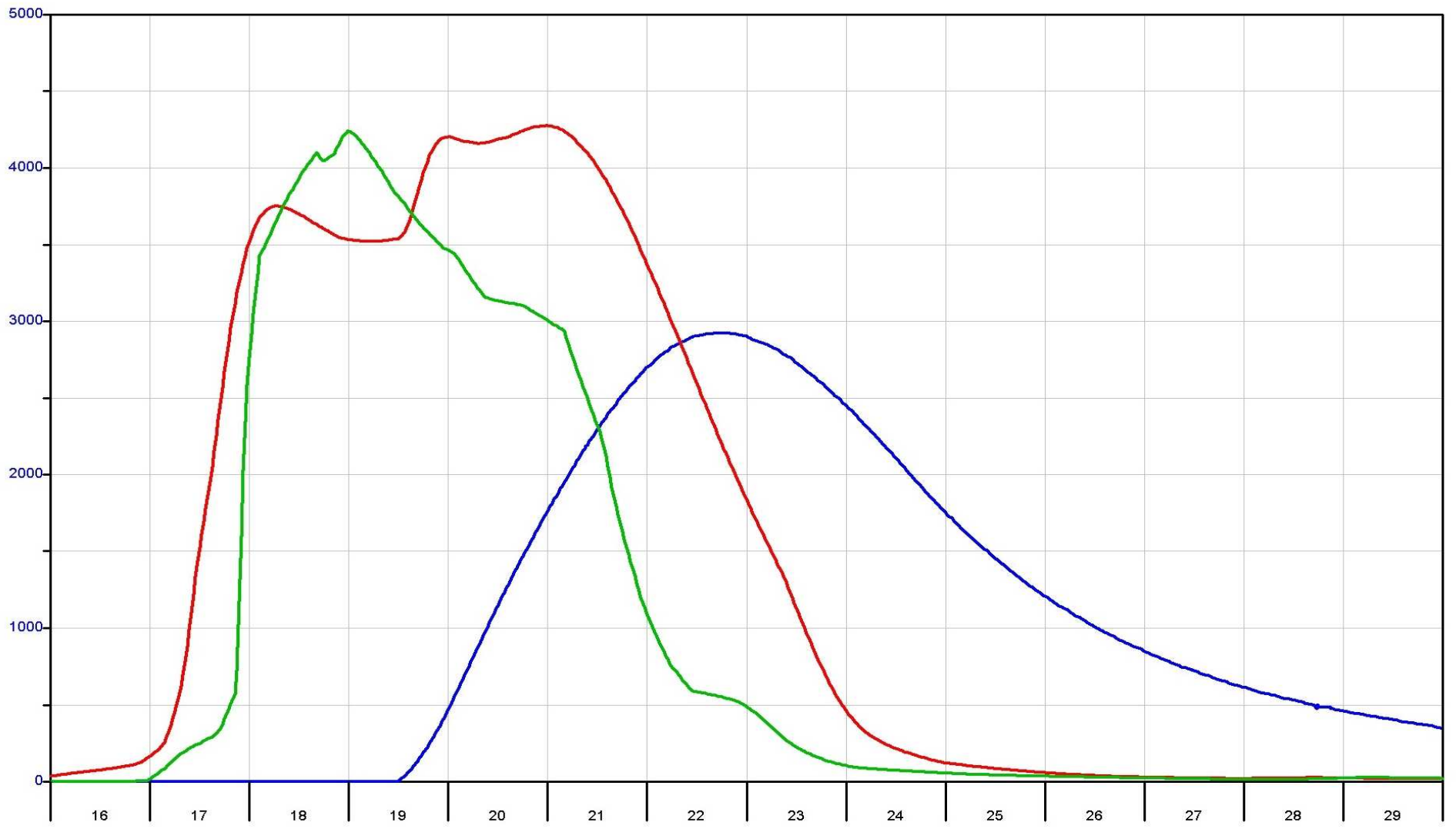


QId NRW SWDB

Period 14 Day Plot Start 00:00_16/01/2008 Plot End 00:00_30/01/2008

2008

130216A	Nogoa R_Fairbairn	Spillway	Discharge (Cumeecs)	T
130209A	Nogoa R_Craigmore	Inflow	Discharge (Cumeecs)	
130206A	Theresa_Gregory Hwy	Highway	Discharge (Cumeecs)	

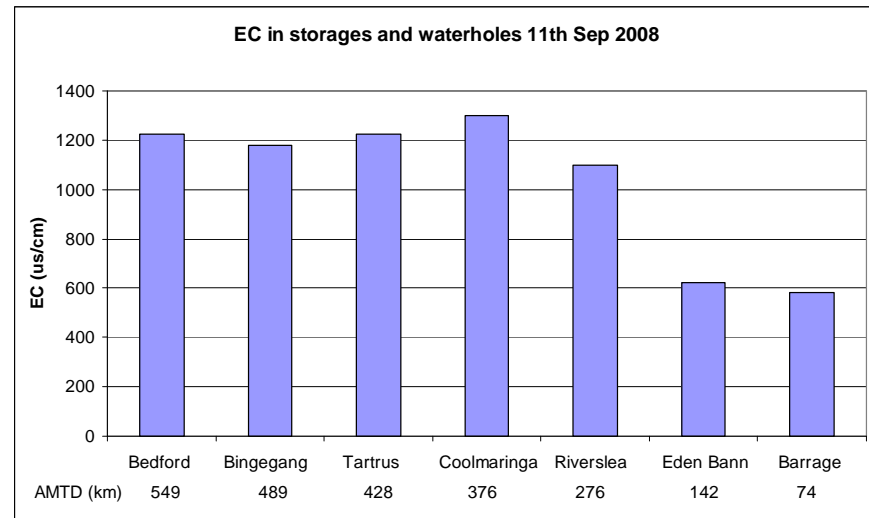


Dewatering

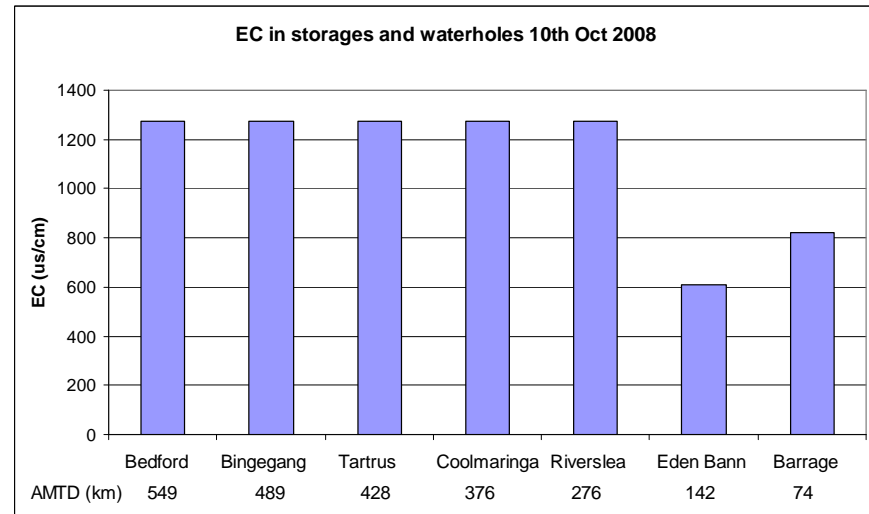
- Commenced February 2008, ceased September 2008
- 140,000 MI has been pumped from the mine
- 10-12,000 MI was transferred to one of the pits
- 60,000 MI of water purchased

EC in storages and waterholes

11th Sep 2008

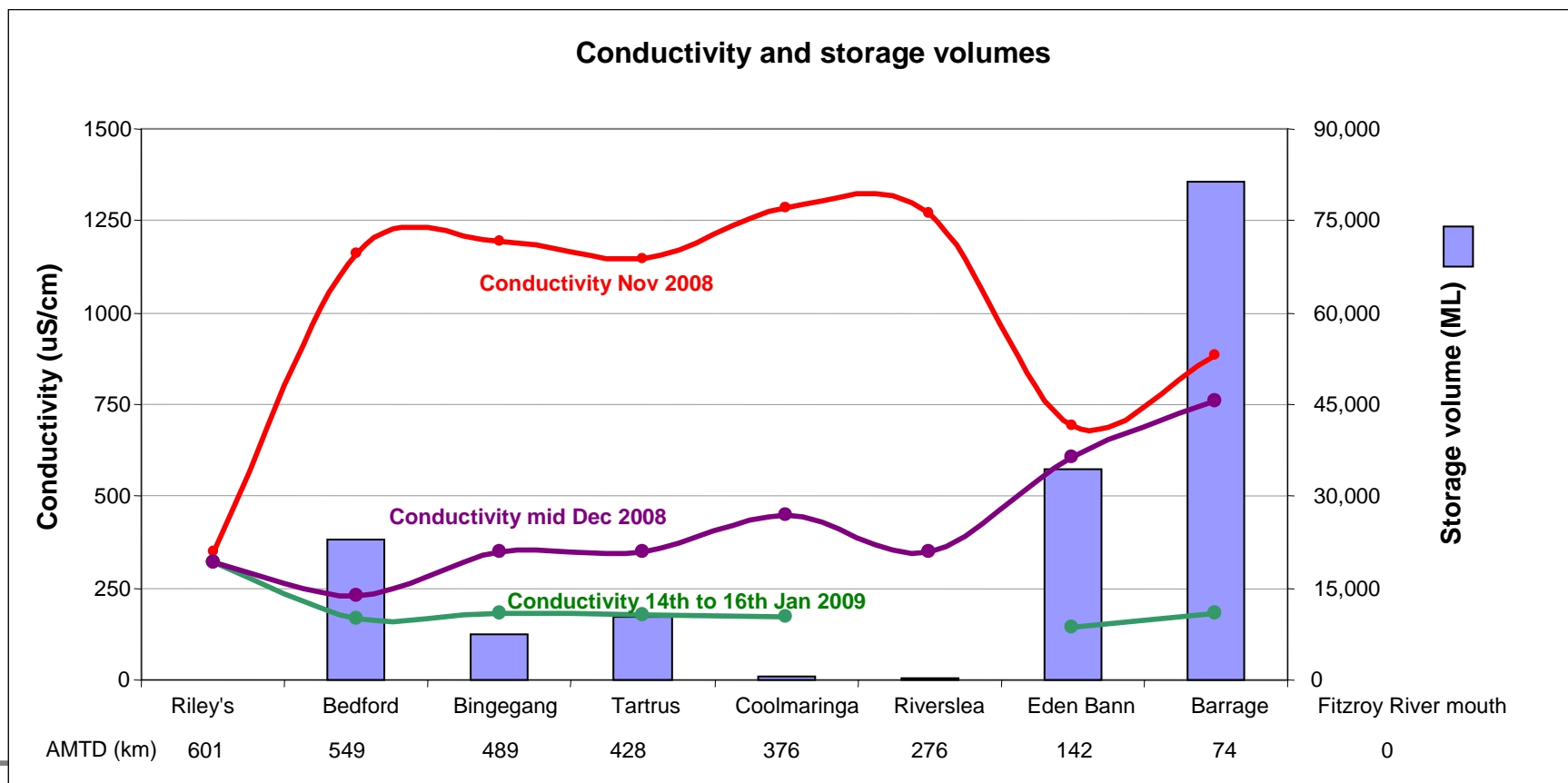


10th Oct 2008

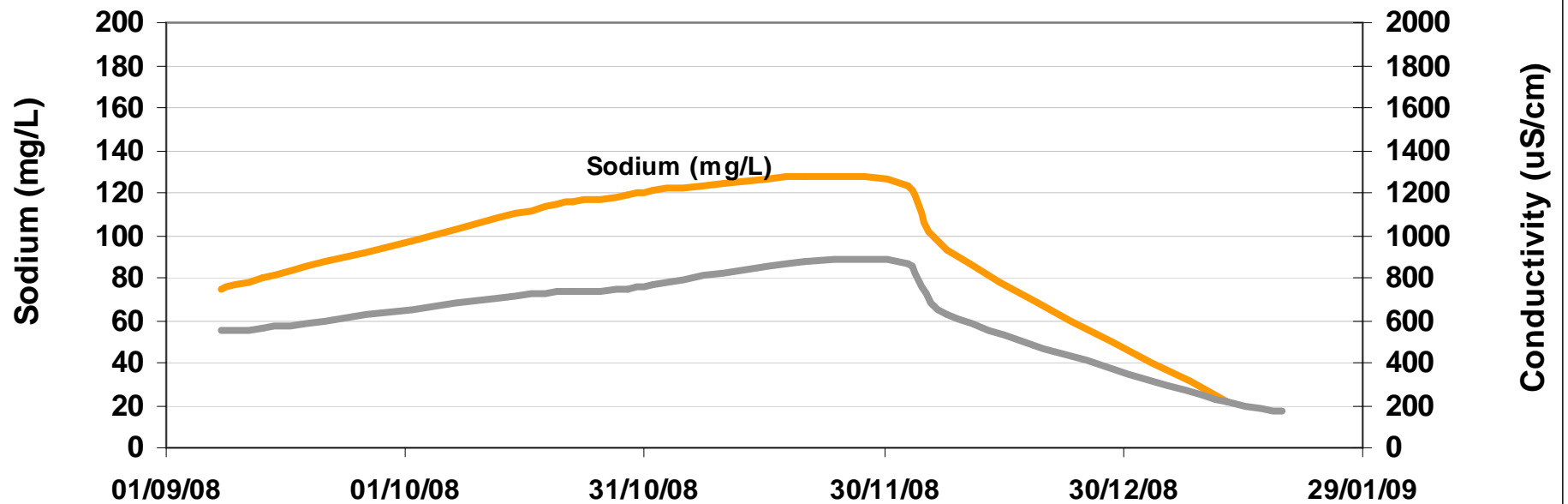


Mackenzie and Fitzroy Rivers - Conductivity

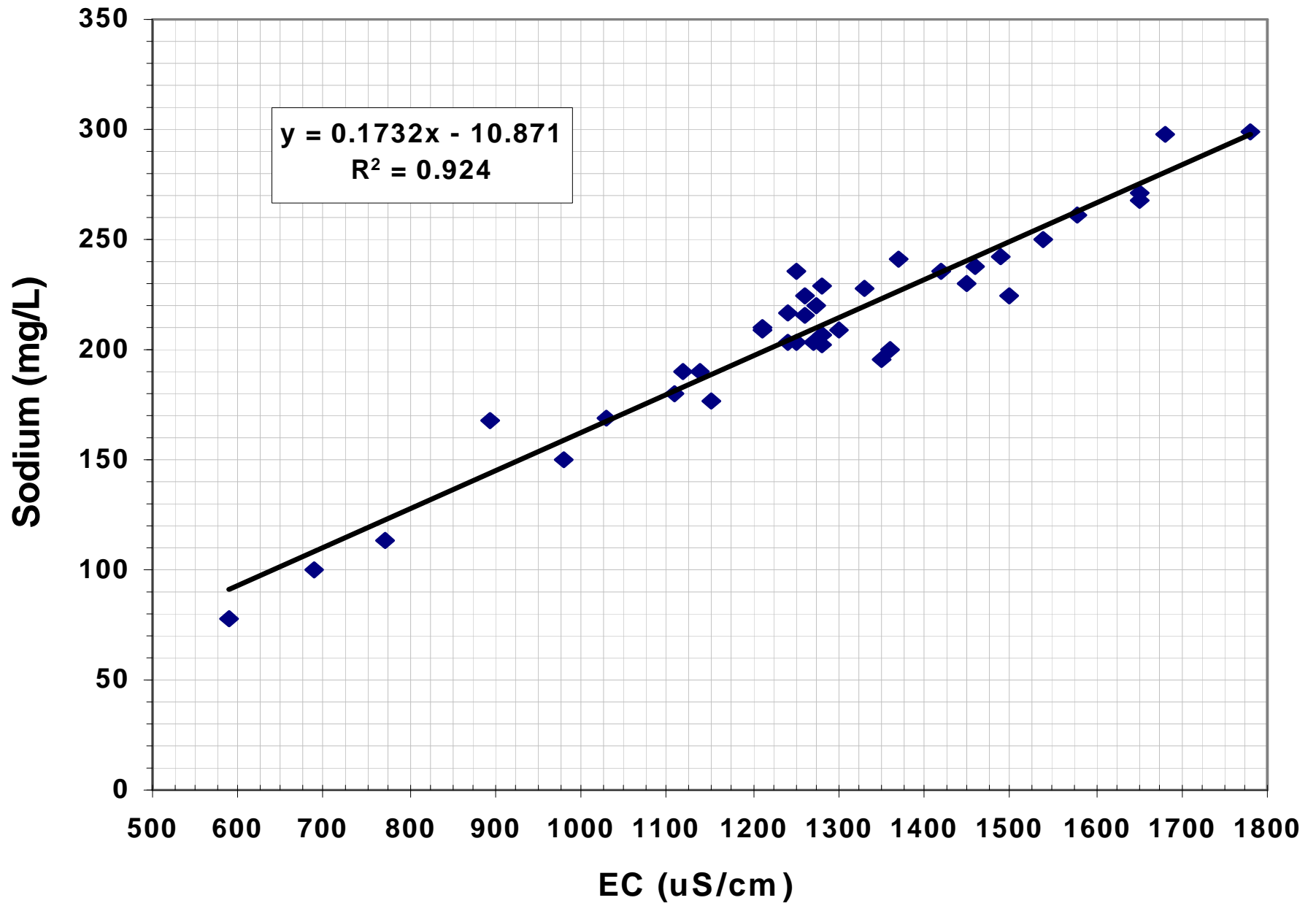
Nov 2008 to Jan 2009



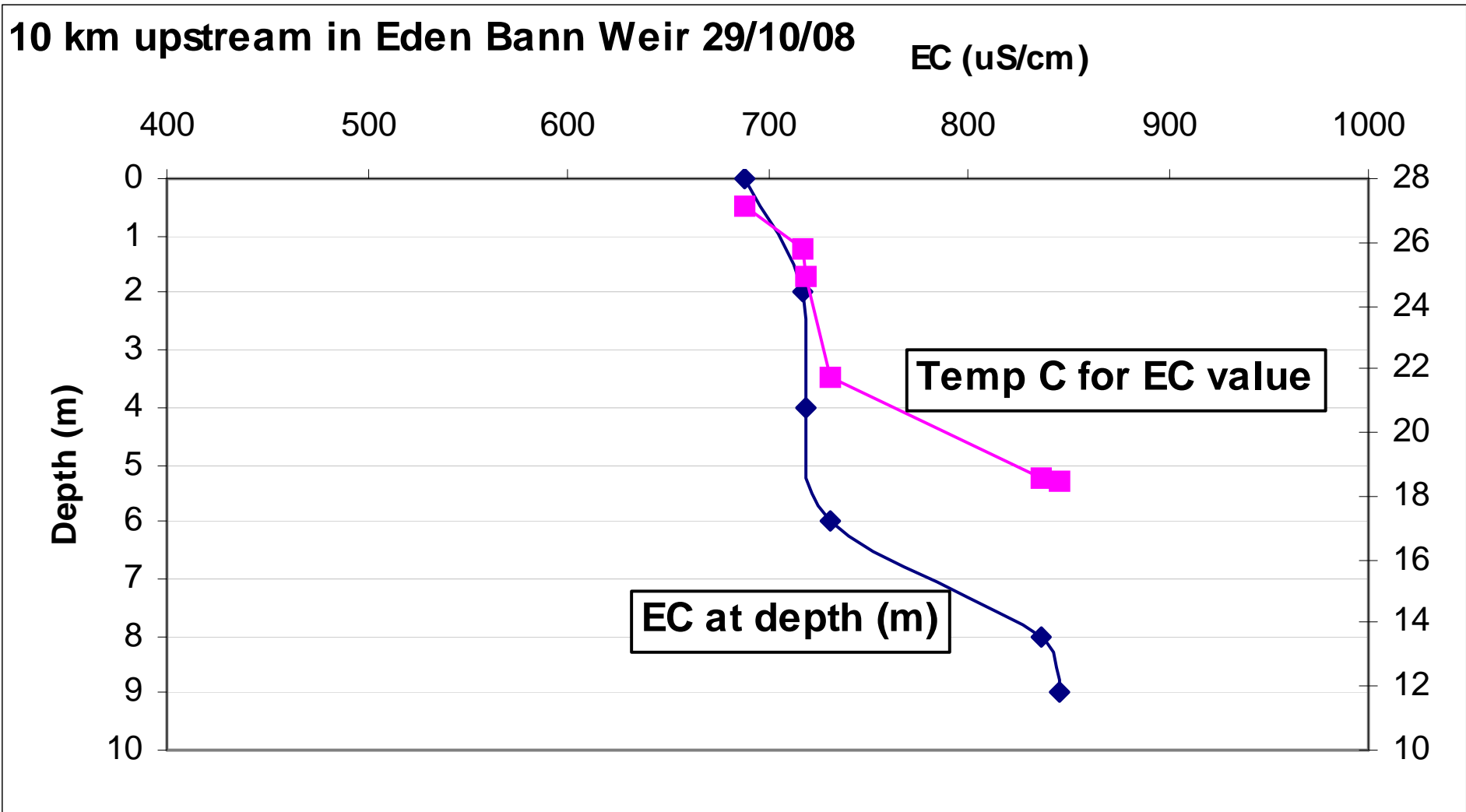
Fitzroy River Barrage - Rockhampton - town water intake Sodium and Conductivity levels



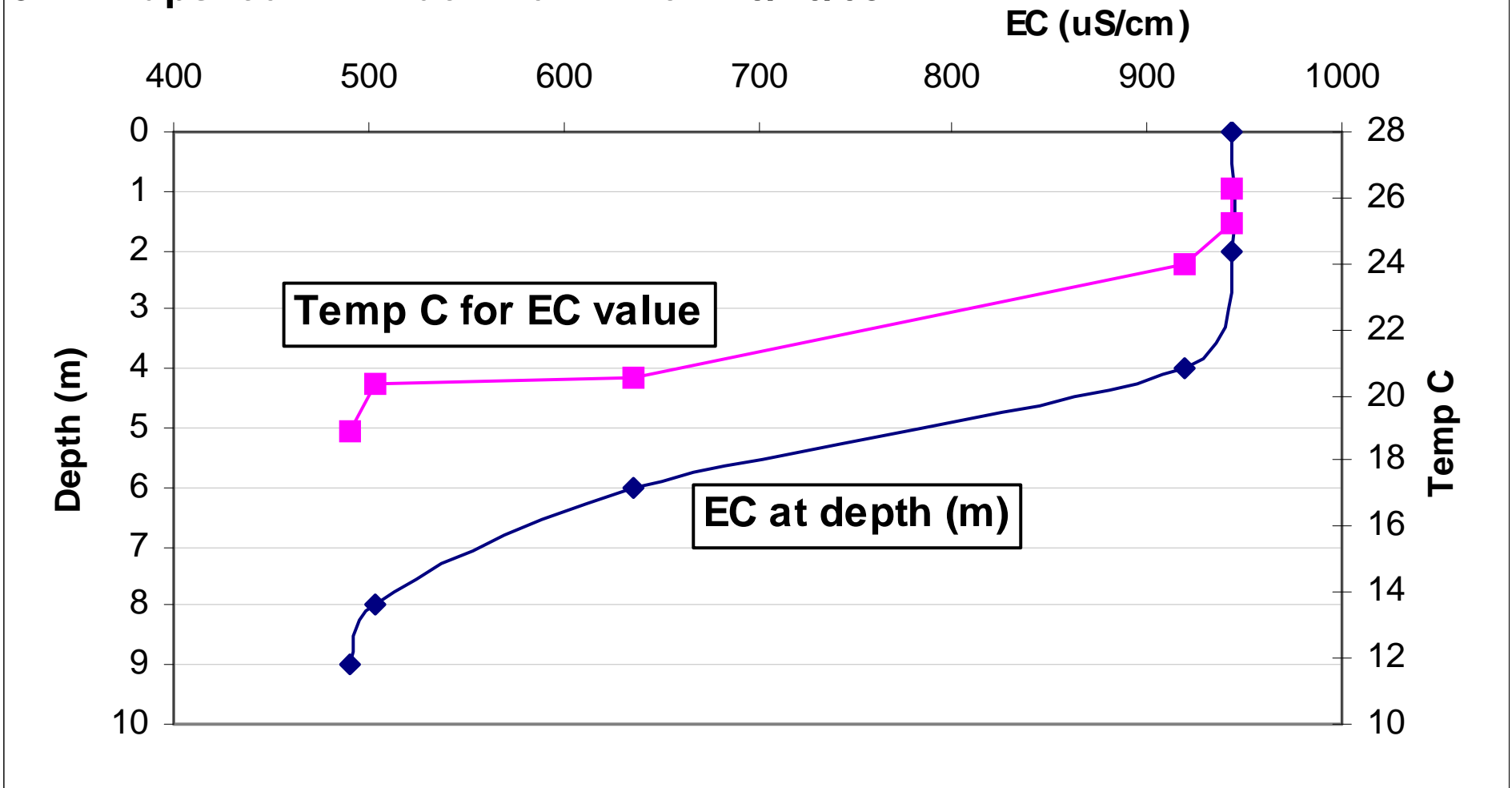
**Mackenzie River Sodium (mg/L) and EC
42 paired samples (Ensham release water)**



10 km upstream in Eden Bann Weir 29/10/08



32 km upstream in Eden Bann Weir 29/10/08



Impacts - External

- Urban water supplies and Human Health
- Livestock production
- Irrigators
- Stanwell Power Station
- Aquatic Flora and Fauna

Government Response

- 12th September meeting
- Technical Working Group formed
- Minister McNamara (EPA) was the spokesperson
- Monitoring program
- Barry Hart Report
- Cumulative Impact Report

What Was Done

- Increased monitoring
- Modify infrastructure
- Modify release strategies
 - Bedford, Bingegang Tartrus
 - Edan Bann Fitzroy River Barrage
- Advice
 - Health, Agriculture, Irrigation, Urban
- Daily and Weekly updates
- Water Quality Database

Return to Normal

- 100 000 – 200 000 run off event
- Release of water from Fairbairn not an option
- Return to normal mid January 2009

Can Levies be Built on a Floodplain

20th Jan 2008.

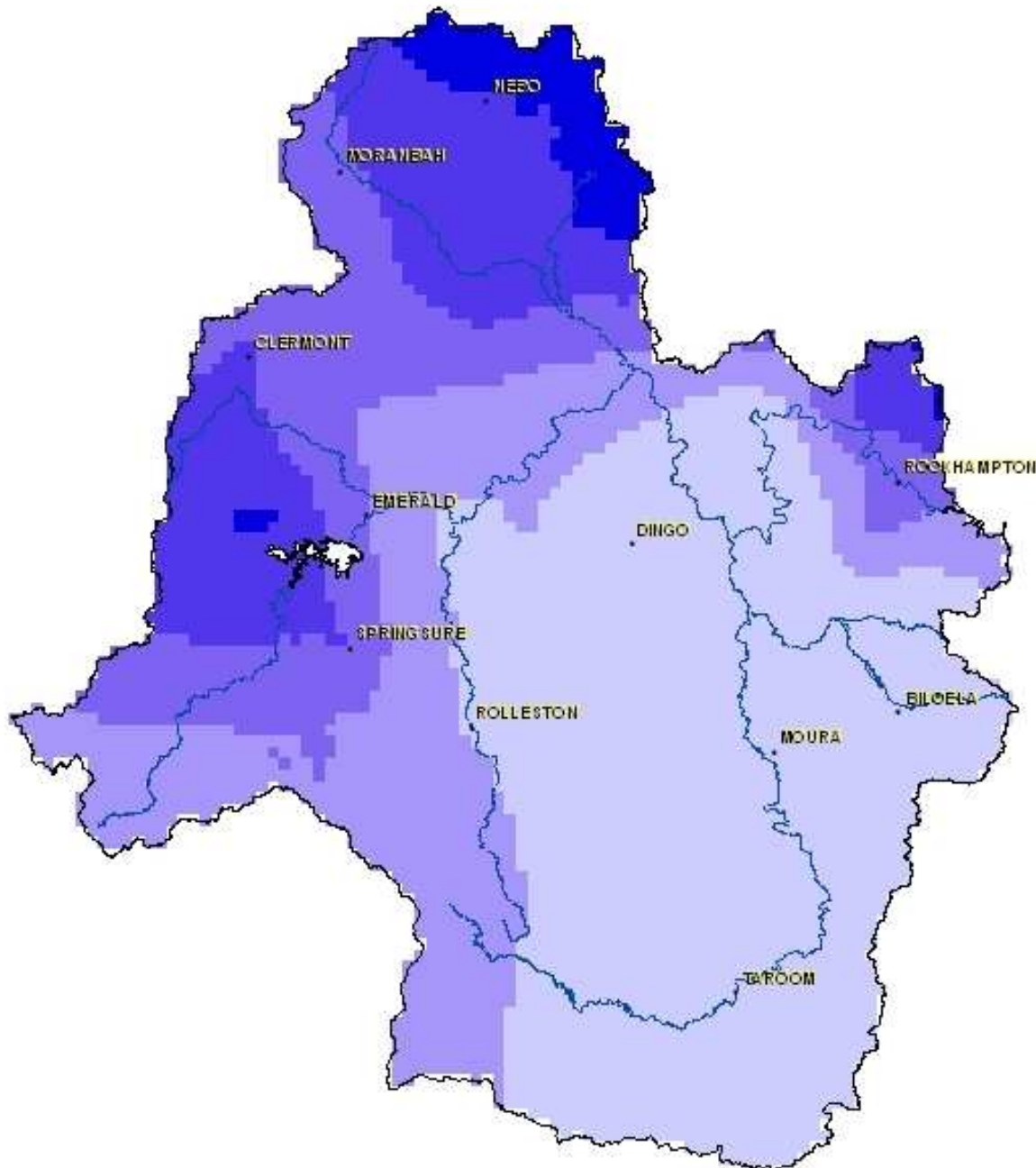
Nogoa River levee banks at Bridge Flats.

Approximately 18km upstream Duckponds via the Nogoa Rivers main channel.




Any Questions or Comments?

2008 total rain map

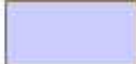




Rainfall (mm)

 Fairbairn_dam

Extract_Full1

VALUE

	24 - 140
	141 - 268
	269 - 395
	396 - 525
	526 - 854

Theresa Ck at Main Road 52 year record

