

Drought Management
Will Your System Cope?

**NSW Drought Impacts
During 2002 and 2003**

John Moorhouse
September 2003



Darling River – 1991 Algae Emergency



John Moorhouse

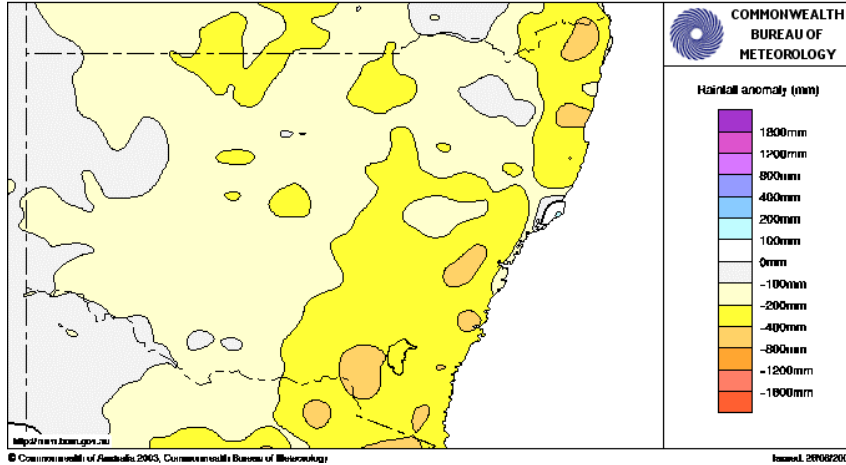
Girilambone Groundtanks - 1982



John Moorhouse

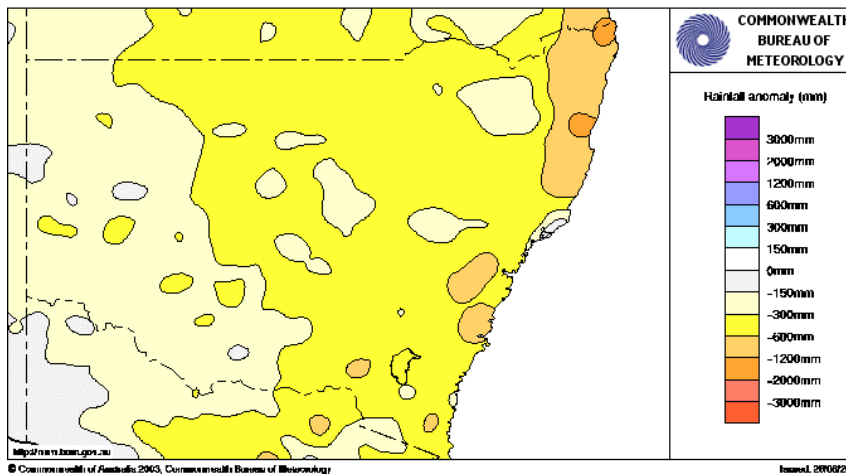
Moruya River – February 1982

New South Wales Rainfall Anomalies 1 August 2002 to 31 July 2003
 Product of the National Climate Centre

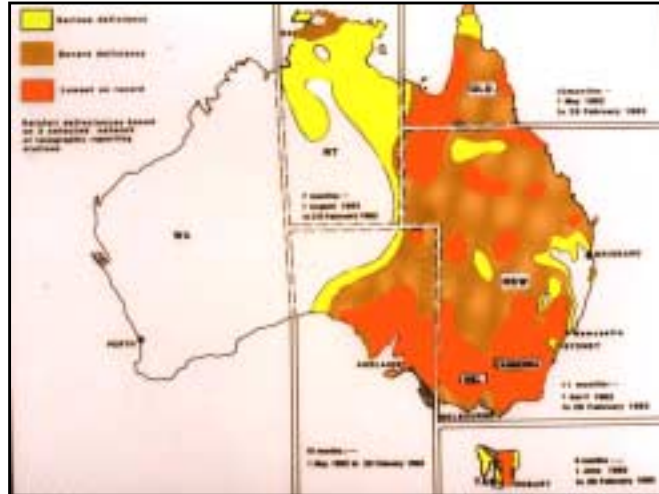


12 – Month Rainfall Anomalies to July 2003

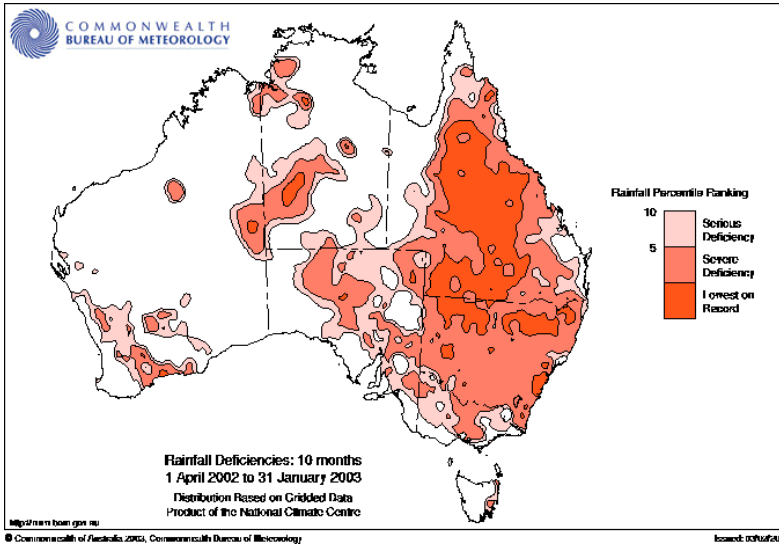
New South Wales Rainfall Anomalies 1 August 2001 to 31 July 2003
 Product of the National Climate Centre



24 – Month Rainfall Anomalies to July 2003



11 – Month Rainfall Deficiencies to February 1983



10 – Month Rainfall Deficiencies to January 2003



MINISTRY OF ENERGY AND UTILITIES
NEW SOUTH WALES GOVERNMENT

Comparison Between
Volumes of Water
Stored in Major
Irrigation Dams
in 1983 and 2003

Storage Dam	Capacity	% Full (Mar 1983)	% Full (Aug 2002)	% Full (Feb 2002)	% Full (Aug 2003)
Dartmouth	3906 GL	12 %	78 %	37 %	33 %
Hume	3038 GL	8 %	30 %	6 %	36 %
Burrinjuck	1026 GL	5 %	30 %	7 %	15 %
Blowering	1628 GL	1 %	37 %	8 %	32 %
Wyangala	1220 GL	3 %	39 %	12 %	10 %
L.Cargelligo	35.9 GL	10 %	93 %	58 %	40 %
L. Brewster	153 GL	Empty	14 %	Empty	Empty
Carcoar	35.8 GL	2 %	79 %	38 %	27 %
Burrendong	1188 GL	13 %	36 %	5 %	15 %
Chaffey	61.8 GL	5 %	75 %	41 %	32 %
Keepit	425 GL	9 %	21 %	10 %	17 %
Copeton	1364 GL	5 %	37 %	9 %	15 %
Pindari	37.5 GL	39 %			
Pindari Raised	312 GL		60 %	20 %	28 %
Glenlyon	253 GL	12 %	48 %	11 %	10 %
Menindee Lakes	1793 GL	28 %	21 %	7 %	N/A
Brogo	9 GL	13 %	100 %	11 %	100 %
Lostock	20 GL	80 %	93 %	76 %	98 %
Glenbawn	228 GL	11 %			
Glenbawn Raised	750 GL		91 %	79 %	69 %
Toonumbar	11 GL	88 %	45 %	12 %	46 %
Glennies Creek	283 GL	3 %	87 %	70 %	65 %
Windamere	368 GL		83 %	51 %	50 %
Split Rock	397 GL		88 %	12 %	12 %



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DROUGHTWATCH 2002-03
as at 19 February 2003





Leonie Huxedup

Wyangala Dam – August 2003 (9%)



Leonie Huxedup

Wyangala Dam – August 2003

Performance of Town Water Supply Schemes in the Summer of 2002/3

Scheme Category	Number Failed	Number at Risk
On-Stream Dam	1 (Quality)	0
Scheme with Storage	8	41
Regulated River	0	0
Un-Regulated River	2	9
Deep Bores	0	0
Shallow Bores	3	4
Rainwater Tanks	11	20

Droughtwatch 2002/2003

Monitoring

- Name of Town/Scheme
- Water Utility
- Scheme Status
- Drought Management Plan Status
- Government Assistance Sought
- Government Assistance Provided
- Date of Report
- Restriction Level

Droughtwatch 2002/2003

Assisting Water Utilities

- Drought Management Planning
- Consultations with Water Users, Bulk Water Providers, Water Managers, etc.
- Consultations with Regulators
- Maintaining Essential Supplies
- Arranging Technical and Financial Assistance



Water Cartage



Water Train - 1982



Water Train Trial – December 1994
Sydney

Lessons from 2002 & 2003

- Need for accurate Asset Registers
- Must comply with normal statutory requirements
- Lack of Drought Management Planning
- Must follow Drought Management Plan recommendations
- Need to keep Drought Management Plans up to date
- Effectiveness of Groundwater

Actions for the Summer of 2003/4

- Lachlan Valley towns
- Southern Tablelands towns
- NSW North Coast
- Canberra and Sydney
- Other Communities

Challenges for the Future

- Review of the Drought Security Guidelines
- Salinity and Algae Problems in natural streams
- Identification of alternative water sources
- Availability of alternative water sources – rainwater, grey water and effluent
- Connectivity between surface and groundwater systems
- Security of supply for small communities
- Broad scale water restrictions
- Uniform water restrictions for residential consumers
- Guidelines for the Preparation of Drought Management Plans - **Ministry Checklist** - **Signage**

