

Maintaining Service to Customers During the Drought



Government
of South Australia



Context

- Drought severity – low inflows, duration
- Adelaide's supply had been considered secure:
 - TWO supply sources
 - Adelaide Hills storage capacity approximately 1 year's supply
 - Back up from Hume and Dartmouth Dams (via River Murray)
- BOTH supplies under stress from 2006/07
- Action required to ensure we maintained supply suitable for critical needs
- Key issues for SA Water and its customers – rising salinity, water quality risks, and falling water levels (especially downstream of Blanchetown)

Short term issues

- Maximise water available
 - water sharing with other Basin states – managed by DWLBC (DFW)
 - purchase of temporary allocations from willing sellers interstate
- Make the best of what we had
 - Water conservation / water restrictions
- Limitations with major pumping stations on River Murray
 - Ensure continuing operation
- Distribution system operation during restrictions
- Water Quality in the River Murray
 - Adaptive management

Water sharing with other Basin states

- Sufficient flow to SA needed to keep salinity within drinkable limits
- Acquire a reserve to call on in emergency

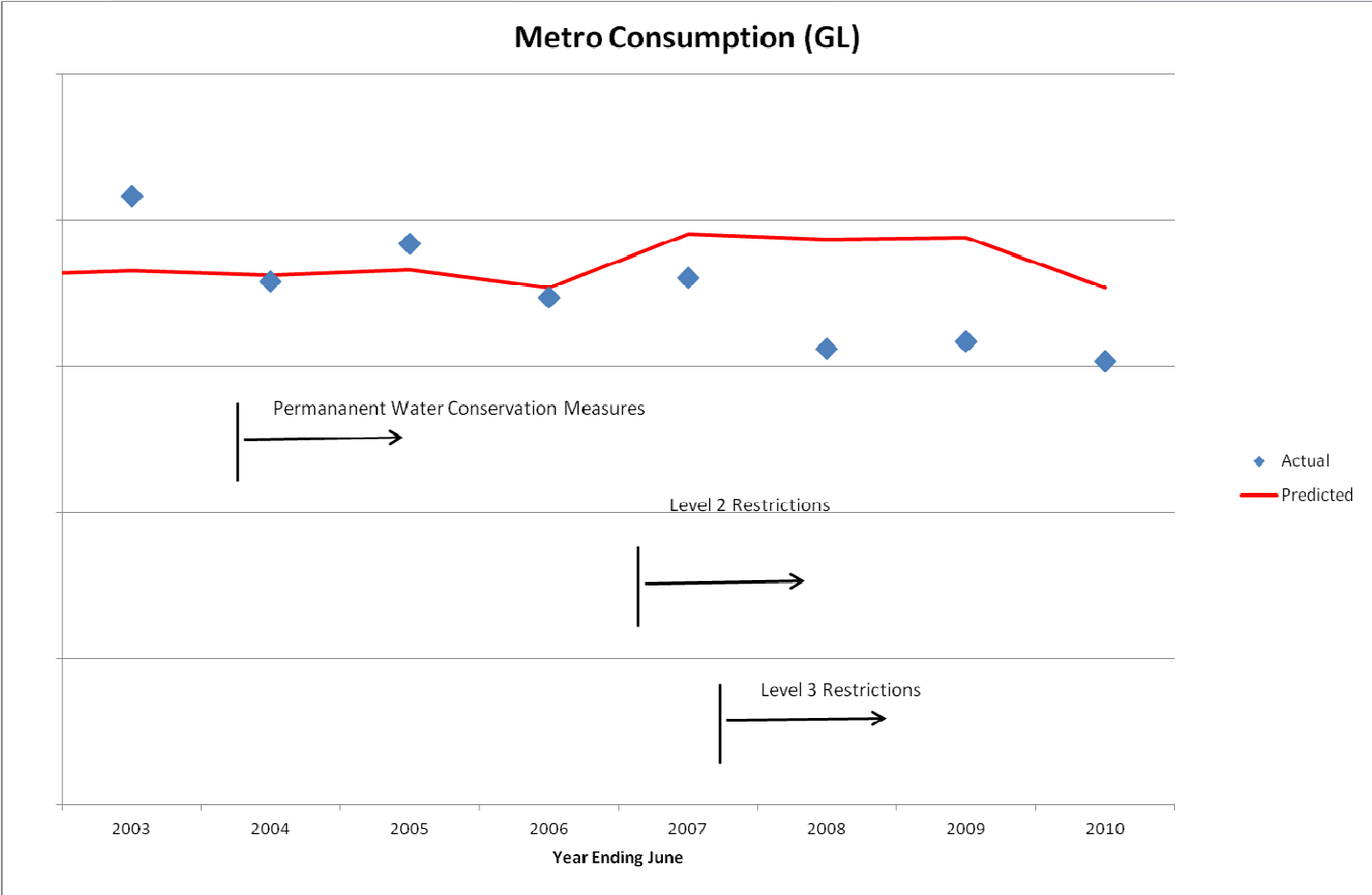
Water Conservation

- Conserve what we have for as long as possible
- Water sharing arrangements with other States conditional on restricted use
 - Restriction levels developed – progressive increase in savings objective
- Drought Response Team in SA Water
 - Key decisions, eg activities permitted/not permitted across restriction levels
- Water Conservation Team
 - Enforcements Team of 40 at height of restrictions
 - Permits
 - Rebate payments
 - Community engagement and communication 24 x 7 call centre for restriction & rebate inquiries, > peak1000 calls/day

Water Conservation

- Water restrictions
 - From October 2006 – at Level 2
 - Level 3 'enhanced' from January 2007
 - Some adjustment over time of watering hours within Level 3
 - Limited impact of changed watering hours on distribution system pressures
- Rebates
 - low-flow showerheads
 - home water audits
 - selected water efficient garden products
 - water efficient washing machines
 - dual flush toilets
- Response
 - Reduced consumption
 - Customer Satisfaction

Consumption



Response – Customer Satisfaction

- SA Water’s customer surveys during and after the drought showed a high level of satisfaction with the way in which the drought was managed, eg:
 - “Water restrictions are a necessary response to drought” 4.5 (out of 5)
 - “SA Water did well to maintain supply during the drought” 4.1 (out of 5)

Pump Station Modifications

- Pump station designs allowed for water level below Lock 1 to fall by up to 1 metre
- Projections of much lower levels
- Intakes modified to operate at lower levels
- These proved adequate until drought end in 2010

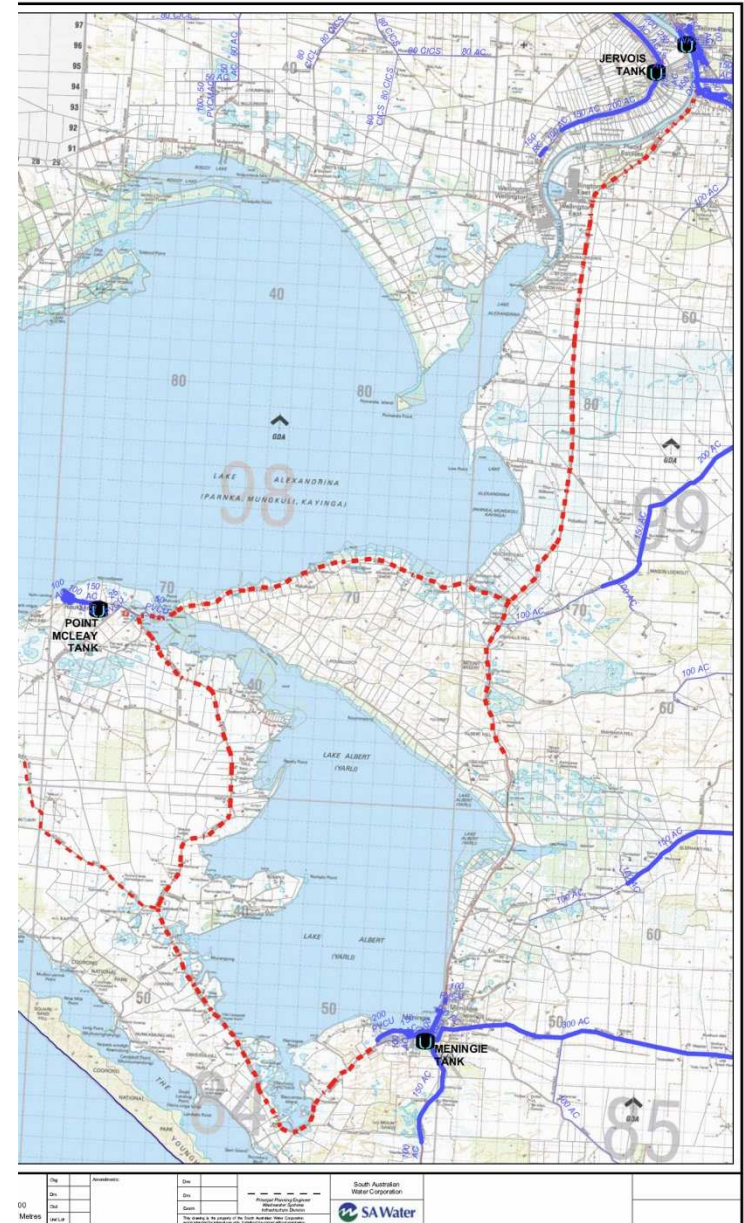
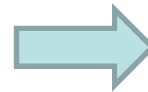


LEVEL	MURRAY BRIDGE	MANNUM	SWAN REACH	TAILEM BEND
EL -0.30	Anti vortex and Vacuum priming			Vacuum priming
EL -0.40		Low lift pumping station		
EL -0.85			Motor water jacket cooling	
EL -1.10				Low lift pumping station
EL -1.60			Low lift pumping station	
EL -2.10	LIMIT OF OPERATION			
EL -3.00		LIMIT OF PUMP STATION OPERATION		

Temporary works removed following return to “normal” pool level

Water Quality

- Impact of low flows:
 - blue-green algal blooms are more likely
 - Increased salinity, especially in Lower Lakes
- Response:
 - SA Water drinking water pipelines built on Narrung Peninsula
 - Water quality improvement projects brought forward, completed in 2009, for small town supplies between Glossop and Mypolonga
 - Clayton supply connected to SA Water trunk main system



Works for other agencies

- SA Water project managed the delivery of works on behalf of other agencies, including:
 - Irrigation pipelines to Langhorne Creek and Currency Creek
 - Temporary pumping station at Narrung Narrows
 - Analysis of a range of other options

