STORMWATER RECYCLING: Towards Water Sensitive Cities



Stephen Hains City of Salisbury, South Australia



The emerging water crisis in southern Australia







Step change in Australian Annual Total Rainfall



1900-2008

1970-2008



River Murray System Inflows (excluding Menindee and Snowy)



Date



Lake Alexandrina Water Level and Salinity 2004-2008

The emerging water crisis in southern Australia







Salisbury Landform



Stormwater Detention



Wetlands – Habitat and conservation









The Barker Inlet & the Port River Estuary







Wetlands & water cleansing

In wet season, stormwater is detained in small basins and dams

Stormwater is controlled to move slowly through wetlands:

This results in reduction of; •Nutrient loads •Gross pollutants •Heavy metals











Aquifer Storage & Recovery



INJECTION BORE

WETLAND

SOILS AND SEDIMENTS



Industrial Applications











Paddocks Wetland

Current Position

- 53 Wetlands; 16 ASR Bores; Detention dams
- Adelaide water consumption
 - 200Gl
 - 80GI from Murray; 180GI in dry year
- Stormwater flowing through Salisbury 33GI
 - Currently capture 5GI
 - Selling 1.5Gl
 - Plan to capture 14Gl within 5 years







Water distribution





1 40

Capital Investment







Mawson Lakes



ASR Mixing Tank



Springbank Waters





Water Business Unit

- Carries all debt, water asset management and operational expenses
- Purchases staff time from Council
- Receives all revenue
- Internal Board
- Business case prepared for all new investment
 - Strong positive cash flow within 5 years



Gross Revenue Forecasts





















Conclusions

