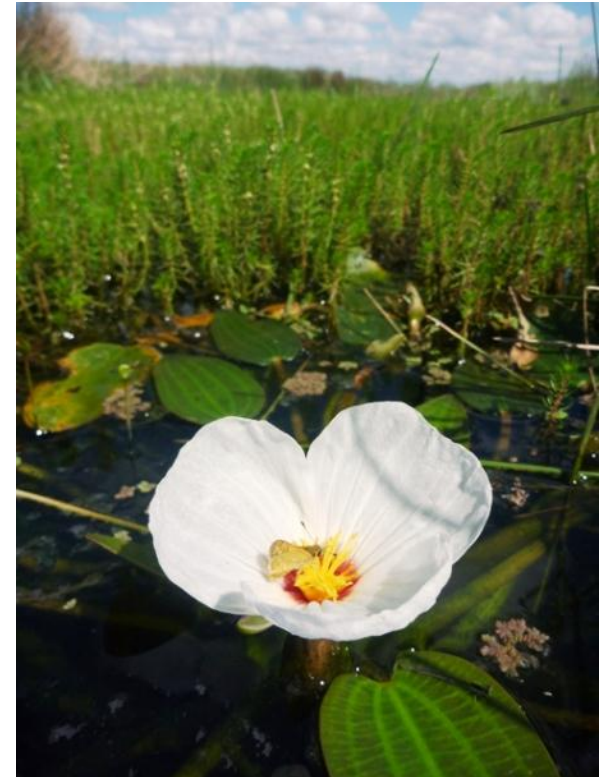


PROTECTING FLOWS TO PROTECTED AREAS

A NSW perspective

Peter Berney, Regional Ecologist
NSW National Parks and Wildlife Service
NSW Office of Environment and Heritage



Presentation Outline

- Protecting flows to inland floodplain freshwater protected areas
- NSW example of protected area water management
- Secondary challenges for water management

NSW Protected Areas: Freshwater Resources

- NSW National Parks estate include a variety of freshwater ecosystems across the State
- Within the NSW Murray Darling Basin, protected area system has historically reserved some wetland areas, including Macquarie Marshes (year 1900) and Murray River
- 2005-2014 Government purchase of key properties in wetland areas (Gwydir, Yanga, Booligal, Toorale).

Freshwater – dependent protected areas

Critical management challenge:

**The major ecosystem driver is
(externally controlled) hydrology**

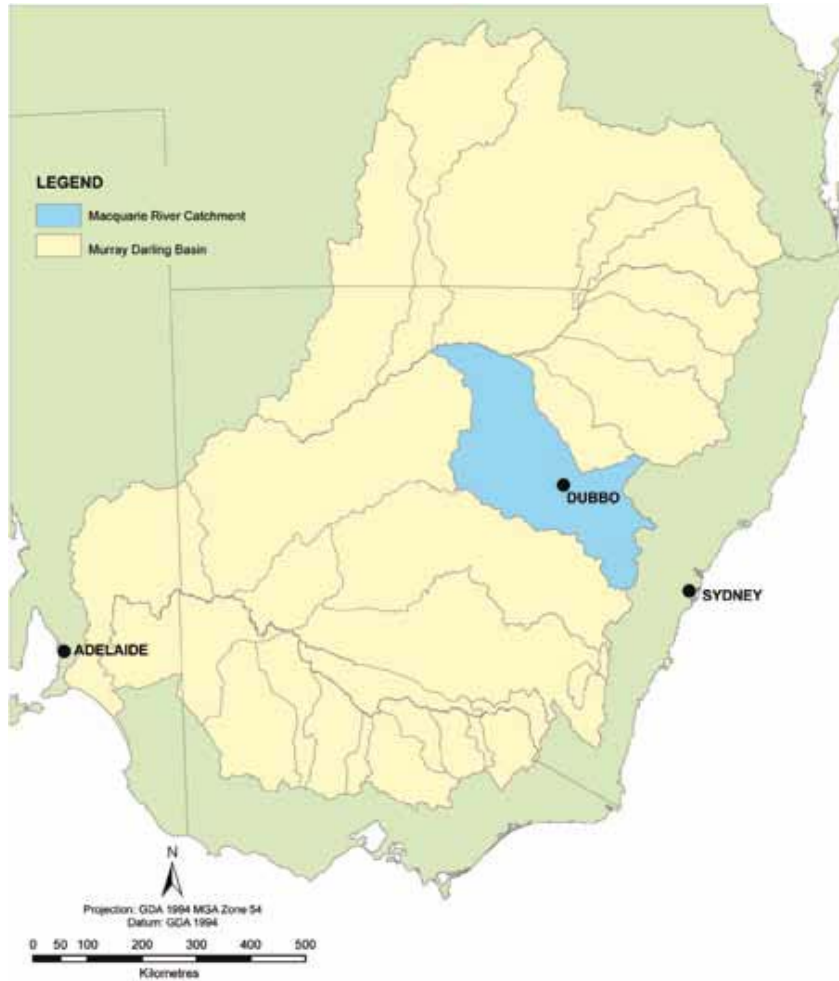
Macquarie Marshes

- The 200,000ha Marshes include ~19,000ha of nature reserves.
- ~20,000ha of the Marshes is Ramsar-listed including the nature reserves and some private land.

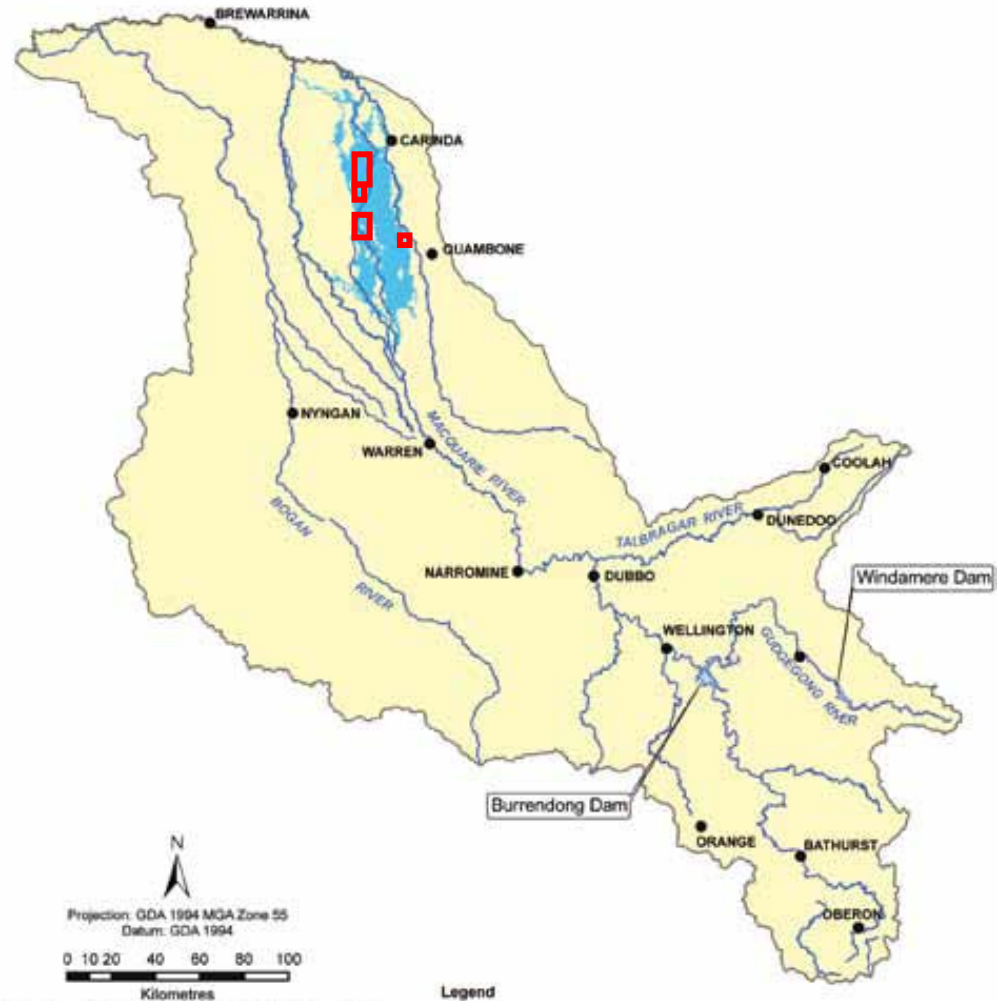


Macquarie Marshes

Source: *Macquarie Marshes Adaptive Environmental Management Plan*
(NSW OEH 2010)



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Legend

- Reservoirs
- Macquarie Marshes

Macquarie Marshes

- River flows are controlled by others – river operators under a statutory *Water Sharing Plan*

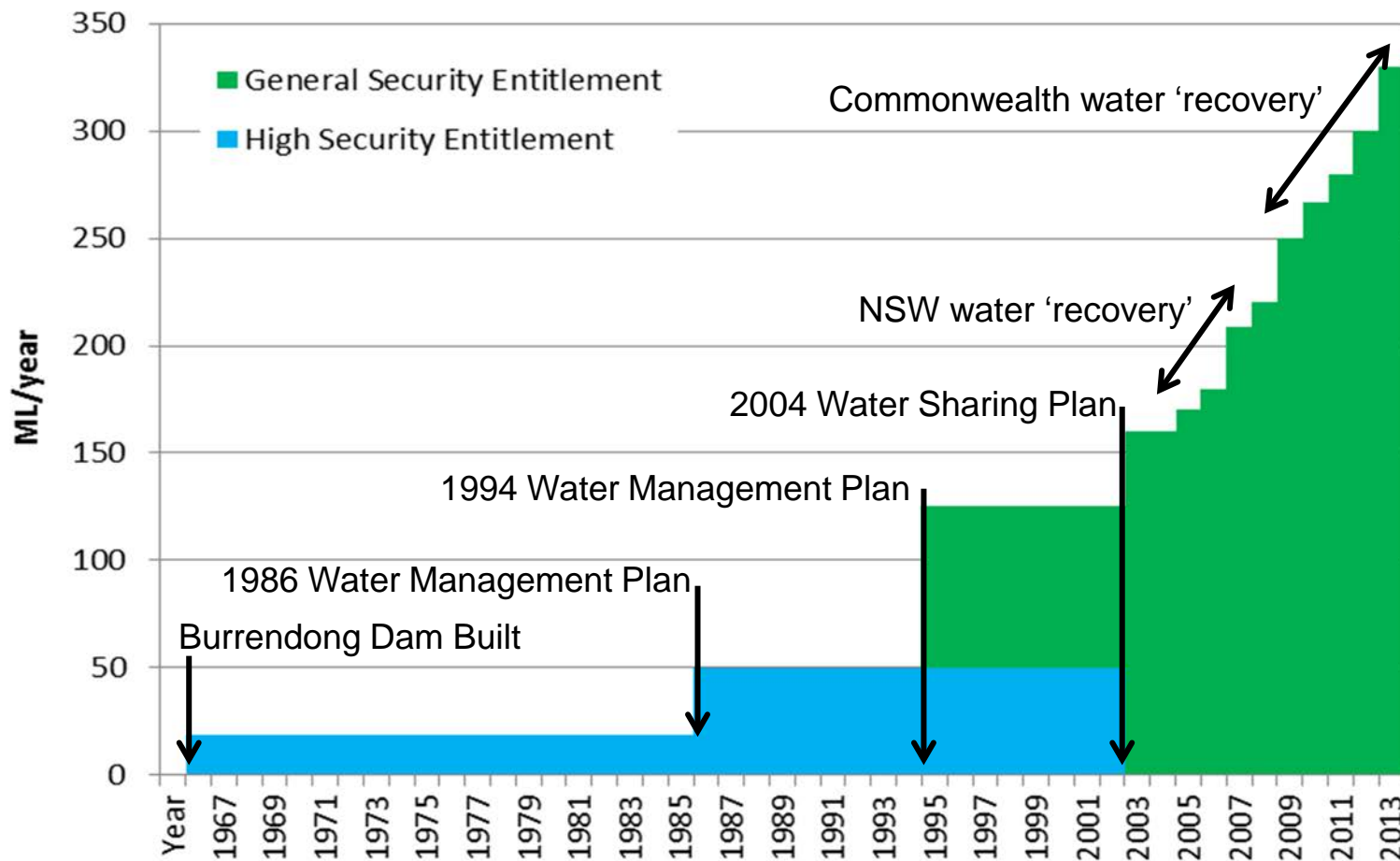


Water sharing plan

Provides rules to allocate flows into the dam for:

- **Environmental water**
- **Consumptive uses – irrigation & urban supplies**
- **Cultural flows (in the future)**
- **Protection of small to median flows**
- **Supplementary water extraction downstream of the dam**

Protected Areas and Flow Management



The Water Management Framework

Murray-Darling Basin Plan



NSW Water Management Act (2000)



Water Sharing Plan - A regulation under the Act - (10 year term)



Environmental Water Advisory Group (EWAG)
Makes recommendations to the Minister & if in line with the Act –
Minister accepts recommendation



Environmental Water Manager – NSW Office of Environment and Heritage

Membership on the Macquarie Marshes Environmental Water Advisory Group

- **NSW Office of Environment and Heritage**
- **NSW National Parks and Wildlife Service**
- **State Water Corporation**
- **Department of Primary Industries (Fisheries)**
- **Aboriginal Community**
- **Central West Local Land Services**
- **Macquarie Marshes Environmental Landholders Assoc.**
- **Irrigator group – Macquarie River Food and Fibre**
- **Macquarie Effluent Creeks Association**
- **Cudgegong Valley Water Users**

Protected Areas involvement in Water Management

- Critical to maintenance of protected area freshwater resources
- Outside traditional reserve management skillset
- Protected areas can form a physical 'focus'/target for new environmental water

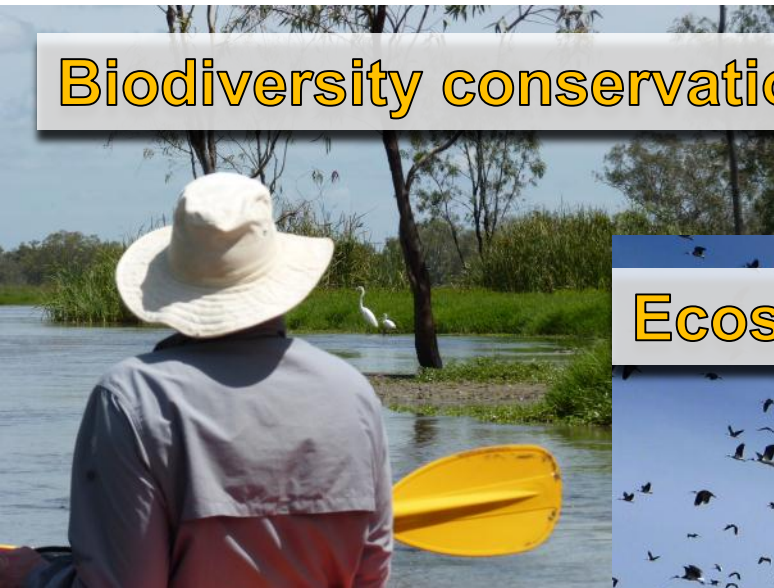
Protected Areas involvement in Water Management

- Lessons from the Macquarie catchment:
 - Engagement with Environmental Water Manager
 - Active involvement with environmental water decisions

Other challenges

- Wetland/landscape ‘system vs site’ thinking
- Identifying thresholds where ecosystem change occurs
- Monitoring challenges
- Community engagement and visitation

Significance of Outcomes



Biodiversity conservation



Ecosystem services



Sustainable regional economy

