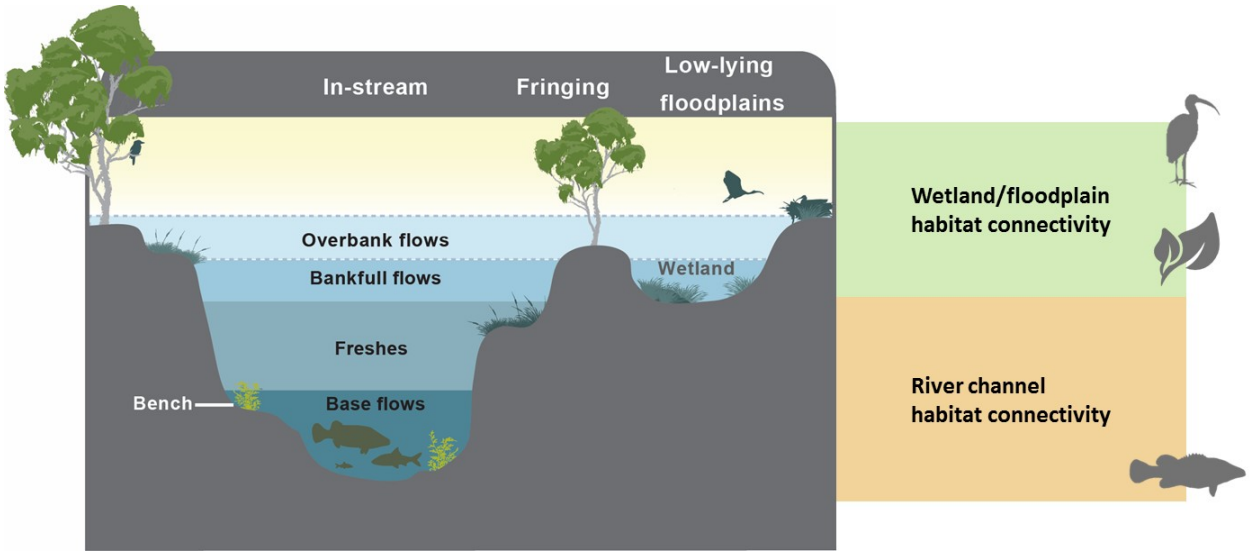
Macquarie–Castlereagh

How much water recovery is being looked at?

- Baseline diversion limit (excluding interceptions), or how much water was available for consumptive use as at 2009, is 424.3 GL.
- Current Basin Plan legislation has a local water recovery target of 65 GL in the Macquarie–Castlereagh. This is a 15% reduction in the consumptive pool.
- Current Basin Plan legislation also has a shared water recovery target of 143 GL across catchments of the North to meet the needs of the Barwon–Darling system. This includes a contribution from the Macquarie–Castlereagh.
- An estimate of 82.5 GL has been recovered as at December 2015, which was used in the modelling as a standard point-in-time estimate. This is not necessarily where water recovery is at now.
- **The Northern Basin Review is looking at a range of water recovery scenarios. These range from no further water recovery in the Macquarie–Castlereagh, up to 5 GL of water recovery, and one scenario that has return of 6 GL back to the consumptive pool.**

What flow indicators are we using and why?



Wetland/Floodplain indicators:

These are four overbank flow indicators of a range of sizes, including ones that:

- Provide large enough flows for long enough to reach key flood dependent vegetation on the floodplain to maintain its character and condition
- Provide a large enough flow to reach key waterbird breeding and foraging sites for long enough to enable waterbirds to fledge their young

- Provide flows often enough so that waterbirds have more than one opportunity to breed during their lives (some ducks only live for 3-4 years while some of the bigger birds such as ibis can live up to 8 years)

Why?	Where in the landscape?	Size of flow	Timing	How often? (percentage of years)
Wetland/floodplain • Protect and restore Ramsar sites • Water wetlands and floodplain vegetation • Provide habitat for colonial waterbird breeding • Maintain marsh club rush and other important wetland vegetation • Increase food resources – exchange nutrients between river channels and floodplain • Inundate fringing vegetation, especially river cooba and red gum • Floodplain productivity (grasslands)	Wetlands and near-channel floodplain	100 GL	Volume over 5 successive months, Jun-Apr	80-85
	low-level floodplain (majority of red gum forest)	250 GL	Volume over 5 successive months, Jun-Apr	40-50
	mid-level floodplain (broader marshes including black box and coolibah)	400 GL	Volume over 7 successive months, Jun-Apr	30-40
	high-level floodplain (broader marshes and woodland vegetation)	700 GL	Volume over 8 successive months, Jun-May	17

What are the Macquarie–Castlereagh environmental results?

- Water recovery for the Macquarie has largely been completed. Only one recovery scenario looks at recovering further water (5 GL), and one scenario looks at returning water for consumptive use (6 GL).
- In all water recovery scenarios we achieve 4 out of the 4 flow indicators.
- All scenarios reach the target frequency for high, mid and low-level floodplain, and wetlands and near-channel vegetation flow indicators (including supporting colonial waterbird breeding).
- We are confident that the range of water recovery scenarios being looked at will have good environmental outcomes for the Macquarie–Castlereagh.