

Macquarie-Cudgegong Environmental Water Advisory Group

MEETING SUMMARY 23 March 2022

Willie Retreat, Macquarie Marshes

Attendees: Ian Rogan (Chair), Douglas Juma, Mahmood Khan, Ajantha Prathab, David Duncan, Rob McLellan, Garry Hall, Jo Ocock, Tim Hosking (SWARCO), Nerida Sloane (CEWO), Hayley Behnke (CEWO), invited bird scientists Heather McGinness (CSIRO), Kate Brandis (Uni of NSW).

KEY RECOMMENDATIONS

RECOMMENDATION 1: Burrendong Flood Mitigation Zone – Environmental Demand

- *Target minimum 1,500 ML/day at Marebone from mid-April to end May at Marebone, then switch to transparent flow operation (nil specific Marebone env target) thereafter.*
- *Review this at the end of April 2022 considering conditions at that stage, to continue meeting the objective for waterbirds.*

This was recommended to provide certainty for foraging grounds for the newly fledged waterbirds, allowing them to add condition locally. This flow would also provide ongoing flow links to the Barwon River and add to delivery efficiency in Spring 2022.

RECOMMENDATION 2: Preliminary Objectives for 2022-2023 water year

It was recommended that the 3-year strategy set previously by the group should continue to apply:

- *Continued drought recovery of flow-based ecosystems associated with the Mid and Lower Macquarie River and the Macquarie Marshes wetland system:*
 - *Support growth and seed set in Macquarie Marshes - noting higher floodplain areas can be potentially targeted now that Marshes are wet.*
 - *Recruiting to Macquarie River native fish populations*
 - *Support viable colonial waterbird breeding events should they occur*
 - *connect the mid-Macquarie River to the Barwon River to promote the movement of flow specialist native fish*

OTHER DISCUSSIONS

- **Conditions in the Marshes** have continued to improve, driven by flows from the Burrendong Flood Mitigation Zone. Some members expressed support for how the FMZ had been managed by Water NSW. Flows have been above the minimum target of 3,000 ML/day to support waterbird colonies and foraging grounds.
- **Waterbird colonies** of the Marshes have been monitored collaboratively with NSW and Commonwealth Government resources being deployed with landholder assistance and support. 31 known colonies established in the Marshes, with about 90,000 nests in total (compared to 57,000 in 2016 and 139,000 in 2010).
- The **irrigation season** is coming to an end. Volumes of water used were lower than anticipated, and the season/harvest was around a month behind because the summer was mild.
- **Fish projects:**
 - There has been a positive uptake of fish screens in the catchment. Majority of fish in irrigation channels have been native, so more screens should help.

- Another native fish monitoring project has been contracted by the CEWO for DPI Fisheries to monitor spawning and recruitment for the next year as well as movement and nest disturbance in the mid-Macquarie River until 2023.

ACTION: Request DPI-Fisheries provide an update to the EWAG on new technology for detecting where fish are breeding in the Basin at the next meeting.

- Remote sensing data for **Marshes inundation extent** in 2022 is not available yet. This was 135,520 ha in December 2021, but will now be lower as flows receded since then.
- **ENVIRONMENTAL WATER USE**
 - Total discretionary environmental water use during the 2021-2022 water year to date: **71.35 GL**
 - **Translucent EWA: 40.5 GL**
 - **Active EWA: 17 GL**
 - **GS HEW (NSW & CEW): 10.6 GL**
 - **Supp HEW (NSW & CEW): 3.25 GL**
 - **Total volume available for use (NSW + CEW) = 100% of shares = 334,643 GL total**
- BOM predictions are for moderate temperatures and median rainfall over April-May.
- Monitoring reports and discussion about waterbirds, frogs and vegetation.
- Water temps:
 - Most water has been coming from the Burrendong spillway – this water is around 21–22°C, which is close to the water upstream of the dam, which has been around 22°C. Good outcome for fish.
 - Will try to do a gradual change as water in storage drops, to avoid thermal shock.
- **WATERBIRD MONITORING PRESENTATION**
 - Dr KATE BRANDIS (University of NSW) about ibis colony monitoring, funded collaboratively by the CEWO. Nest counts and UAV (drone) surveys undertaken. Data still being processed but overall a high colony success rate (converting eggs to fledged birds) detected.
 - **Dr HEATHER MCGINNESS (CSIRO):** Waterbird tracking by CSIRO of Macquarie Marshes Ibis. MDB flyway detected for ibis species that may help to prioritise foraging and nesting sites at a Basin scale in future.
- EWAG member recruitment advertising should start in next couple of weeks. Discussions scheduled with community and government people in Mudgee next week.

NEXT MEETING:

- **Dubbo – Detailed Planning meeting**
- **Initial date: 9–10 MAY. LATER REVISED to 24-25 MAY 2022.**