



Water for
Wildlife
in the
Wah Wah
District:
*planning for
the future*



5) "Belaley", Wongalea Road, Gunbar, 2711

Craig McCulloch

Wetland Management Planning

Guide for Crows Nest Swamp

Key Objective: To increase flooding frequency and duration, and control introduced species, establishing it as a private wetland refuge for the Wah Wah region.

Key Actions: Undertake earthworks (approx. \$1000) to facilitate 10 megalitre/day flow rate into north-west corner to supplement existing flows. Expand African Boxthorn and Pig control programs.

Wah Wah: Water, Wetlands & Wildlife

Context: As part of the Australian Government's water use efficiency initiatives, a major infrastructure upgrade has been planned for the Wah Wah district, north of Hay in the New South Wales Riverina. The \$44M replacement of open channels and ground tanks (farm dams) with a pipeline and trough system is set to recover around 9000 megalitres in water savings per year.

Since the 1930s, many wildlife species have come to depend on the ground tanks, and so in 2011 and 2012, a study initiated by the local Landcare group began. It assessed the biodiversity values of Wah Wah's ground tanks and although they were relatively poor compared to the large, natural wetlands, it found that some supported important habitat and significant wildlife.

With Federal Government *Caring For Our Country* funding, this led to successful habitat enhancement trials, such as earthworks to increase ephemeral shallows and fencing to manage grazing, all completed with a view to mitigating the future loss of habitat when the pipeline replaces the old system.

Murrumbidgee Landcare was then successful in seeking funding from the Norman Wettenhall Foundation in 2015 to capitalise on the momentum and local interest and extend the work to five key natural wetlands by developing specific management planning guides with the respective landholders.

The idea is that these guides will provide a first step in initiating positive management actions and future resources and funding. These plans are intended to be concise, adaptive, guiding documents, and not onerous in their scope and implementation.

Because each of the owners helped determine these management plans and developed their specific objectives, it is hoped there will be a strong sense of ownership moving forward.



The Crows Nest Swamp contains impressive stands of remnant Old Man Saltbush, now rare in Riverina wetlands. At approximately 140 hectares, it is one of the largest, most intact wetlands in the Wah Wah region.

"Changes to how a wetland is managed, even subtle tweaks, can yield huge benefits for wildlife, without hindering agricultural outcomes and often improving them."



Migratory shorebirds, such as these Sharp-tailed (top) and Curlew (bottom) Sandpipers, are highly responsive to the foraging of shallow, open wetlands that form mudflats, like those at the Crows Nest Swamp.



Crows Nest Swamp

Description & History: This approximately 140-hectare wetland supports a range of native plant species, such as Old Man Saltbush (*Atriplex nummularia*), Canegrass (*Eragrostis australasiaca*) and Nitre Goosefoot (*Chenopodium nitrariaceum*). The favourable history of grazing management, resulting in healthy vegetation condition, combined with the large area and its close proximity to the Mirrool Creek, make it a conservation priority for wetland biodiversity in the Wah Wah region. Crows Nest Swamp is normally isolated from the Mirrool Creek floodplain to the south but does connect during extreme wet periods. It fills from its surrounding local catchment following substantial rainfall events, and especially from the north during flood years like 2011. But a number of obstructions like channel banks have reduced the original flow substantially, lowering the frequency and duration of flooding. Belaley has an approximately 150-year history of sheep and cattle grazing, which remain the primary land use. The Crows Nest paddock, like much of the farm, has been managed to maintain a healthy cover of shrubs.

Values: Large, healthy stands of remnant Old Man Saltbush, like those at Crows Nest Swamp, are highly significant in the NSW Riverina. These and other native shrubs contribute to the high habitat diversity at the site. After flooding, this wetland contains large open pools, where waterfowl congregate (see next page) but as the water recedes, vast mudflats form. These are used by a wide range of shorebirds, including resident species that breed here in Australia, like the Black-winged Stilt and Red-kneed Dotterel, and migratory species that breed in Russia, like the Sharp-tailed Sandpiper and Common Greenshank. Crows Nest Swamp has excellent potential to support the globally endangered Australian Painted Snipe and several other threatened species. White-fronted Chats are common here.

Issues: The key issues identified for Crows Nest Swamp relate to flow impediments and flooding regime, and weeds and feral animals that undermine biodiversity values.

Opportunities: To deliver environmental water via the No. 3 channel, control introduced species and manage site as a wildlife refuge.

Key Objective: Increase flooding frequency and duration; control introduced species and establish as a private wetland refuge for the Wah Wah region.

Key Actions: Undertake earthworks (approx. \$1000) to facilitate 10 megalitre/day flow rate into north-west corner so flooding frequency can be increased and to supplement existing flows. Avoid flooding during very hot periods. This has killed shrubs previously. Source funding for African Boxthorn and Pig control programs.

Future Considerations: Consider legally binding covenant to protect Crows Nest Swamp in perpetuity, such as those offered by the Nature Conservation Trust of NSW.

Monitoring: Photo points and aerial imagery could be used to track any changes in the extent and structure of vegetation. Waterbird and frog surveys could be used to help gauge the biodiversity response and support management that maintains the vigour of the shrubs, central to the value of this site.



Belaley's Crows Nest Swamp is one of the largest, most significant wetlands in the Wah Wah region.

Implementation and funding strategy: Michael Fayle (Riverina Local Land Services), James Maguire (New South Wales Office of Environment and Heritage), Erin Lenon (Commonwealth Environment Water Holder) and Karen McCann (MIA Renewal Alliance) are all aware of this site and the opportunities to reinstate flows by delivering environmental water, and control weeds and feral animals. Site visits to organise and approve funding for could be undertaken as soon as possible. Funding and resources can be organised as needed with Murrumbidgee Landcare and Riverina LLS.

Acknowledgements: Marion Benjamin was successful in seeking Norman Wettenhall Foundation funding, while Ian Auld and Michael Fayle helped select sites, and Karen Jamieson helped manage the project. Matt Herring developed these plans with the respective landholders. Thanks also to former owner, Joyce McConnell.

