



Mulwaree River Subcatchment

The Mulwaree River subcatchment is located at the southern boundary of the Hawkesbury Nepean catchment. It is the subcatchment furthest away from the estuary. It is a broad alluvial valley that has undergone significant clearing of both the riparian and floodplain vegetation. There is some urban development with Goulburn city located at the most downstream section of the subcatchment. The subcatchment supports a significant rural industry.

The major rivers are the Mulwaree River and Quialigo Creek. Lake Bathurst and the associated wetlands “The Morass” are important breeding grounds and drought refuge for Australian birds. These wetlands are listed on the Directory of Important Wetlands of Australia.

The Mulwaree is a unique subcatchment in that it has a high representation of the rare Chain of Ponds river channel type (61% of reach length in the subcatchment is Chain of Ponds). The Mulwaree River has large pools and meanders, while Quialigo Creek alternates between Chain of Ponds and Cut and Fill reaches.

Reach Management Recommendations – Mulwaree River Subcatchment

Reach Name	Reach Description	Riparian Land Management Category	Reach Values	Reach Threats	Reach management recommendations (Planning, Education, Works, Monitoring, Institutional)
Mulwaree R1		Revegetation	<ul style="list-style-type: none"> Significant vegetation community (Frost Hollow Grassy Woodland; Tableland Grassy Box-Gum Woodland) Significant irrigation water supply 	<ul style="list-style-type: none"> Damaging access (stock) Barriers to ecosystem functioning Flow extraction Exotic terrestrial pests (deer causing significant damage, especially in upper reaches) Tarago sewage – nutrient impact to reach Incision supplying sediment to downstream Chain of Ponds reach, potentially degrading reach. 	<ul style="list-style-type: none"> Revegetation with indigenous riparian vegetation (W) Removal/replacement of exotic riparian vegetation (W) Management of stock impact on waterways (W) Encourage adoption of sustainable land management practices in riparian lands (E) Aquatic habitat condition and connectivity improvement (P,W) Pest animal management in riparian zone (P,W) Channel bed or bank stabilisation works (W) Water quality / nutrient management (I) Increase community capacity for environmental restoration (E)
Mulwaree R2		Revegetation	<ul style="list-style-type: none"> Wetland of local significance Rare or threatened river category (Chain of Ponds) Identified flagship species (Water Fowl) Significant irrigation water supply Significant community based environment activity 	<ul style="list-style-type: none"> Damaging access (stock - slight) Barriers to ecosystem functioning Flow extraction Potential water quality threat from abattoir and estate developments. Subdivision changing hydrology – threat to Chain of Ponds <p>Action Triggers</p> <ul style="list-style-type: none"> Rare river style (Chain of Ponds). Particularly threatened by changed hydrology resulting from subdivision – could cause channel incision. 	<ul style="list-style-type: none"> Management of stock impacts on waterways (W) Encourage adoption of sustainable land management practices in riparian lands (E) Aquatic habitat condition and connectivity improvement (P,W) Water quantity / flow management (I) Urban water quantity and flow management (I,W) Riparian wetland management Maintain existing community based environment activity (E,P) Revegetation with indigenous riparian vegetation (W)
Mulwaree R3	From junction with Quialigo Creek to junction with Wollondilly River	Revegetation	<ul style="list-style-type: none"> Popular recreational fishing Significant irrigation water supply Significant community based environment activity 	<ul style="list-style-type: none"> Modified / engineered channel (weir in reach) Damaging access (stock) Barriers to ecosystem functioning Flow extraction Water quality Urbanisation (sediment and nutrient impacts). Stormwater and rubbish inflow from urban area particular problem. Willows – significant leaf fall degrading water quality 	<ul style="list-style-type: none"> Revegetation with indigenous riparian vegetation (W) Maintain existing community based environment activity (E,P) Management of stock impact on waterways (W) Encourage adoption of sustainable land management practices in riparian lands (E) Aquatic habitat condition and connectivity improvement (P,W) Removal/replacement of exotic riparian vegetation (W) Water quantity and flow management (I) Urban water quality and sediment management (P,I,W)

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Reach Name	Reach Description	Riparian Land Management Category	Reach Values	Reach Threats	Reach management recommendations (Planning, Education, Works, Monitoring, Institutional)
Qualigo R1	Entire Creek to where it joins the Mulwaree River	Revegetation	<ul style="list-style-type: none"> Wetland of local significance (Rosebank Wetland) Rare or threatened river category (Chain of Ponds) Significant vegetation community (Frost Hollow Grassy Woodland; Tableland Grassy Box-Gum Woodland) Significant community based environment activity 	<ul style="list-style-type: none"> Modified / engineered channel (Goulburn Bypass crosses creek) Damaging access (stock – hard to determine due to flat banks) Barriers to ecosystem functioning Flow extraction Serrated tussock threat Increasing salinity Subdivision changing hydrology – threat to Chain of Ponds <p>Action Triggers</p> <ul style="list-style-type: none"> Rare river category (Chain of Ponds) 	<ul style="list-style-type: none"> Management of stock impacts on waterways (W) Encourage adoption of sustainable land management practices in riparian lands (E) Aquatic habitat condition and connectivity improvement (P,W) Water quantity / flow management (I) Riparian wetland management Urban water quantity / flow management (I,W) Maintain existing community based environmental activity (P,E) Revegetation with indigenous riparian vegetation (W)
Chain of ponds R1	Entire length draining into Lake Bathurst	Revegetation	<ul style="list-style-type: none"> Rare or threatened river category (Chain of Ponds) Wetland of National Significance – Lake Bathurst 	<ul style="list-style-type: none"> Modified / engineered channel (draining of wetland and channel country) Damaging access (stock chasing salt causing erosion of channel) Flow extraction Salinity Rubbish tip in lower section of reach Serrated tussock <p>Action Triggers</p> <ul style="list-style-type: none"> Severe immediate threat – salinity causing erosion 	<ul style="list-style-type: none"> Revegetation with indigenous riparian vegetation (W) Removal/replacement of exotic riparian vegetation (W) Management of stock impact on waterways (W) Encourage adoption of sustainable land management practices in riparian lands (E) Water quantity / flow management (I) Salinity management Riparian wetland management Increase community capacity for environmental restoration (E)