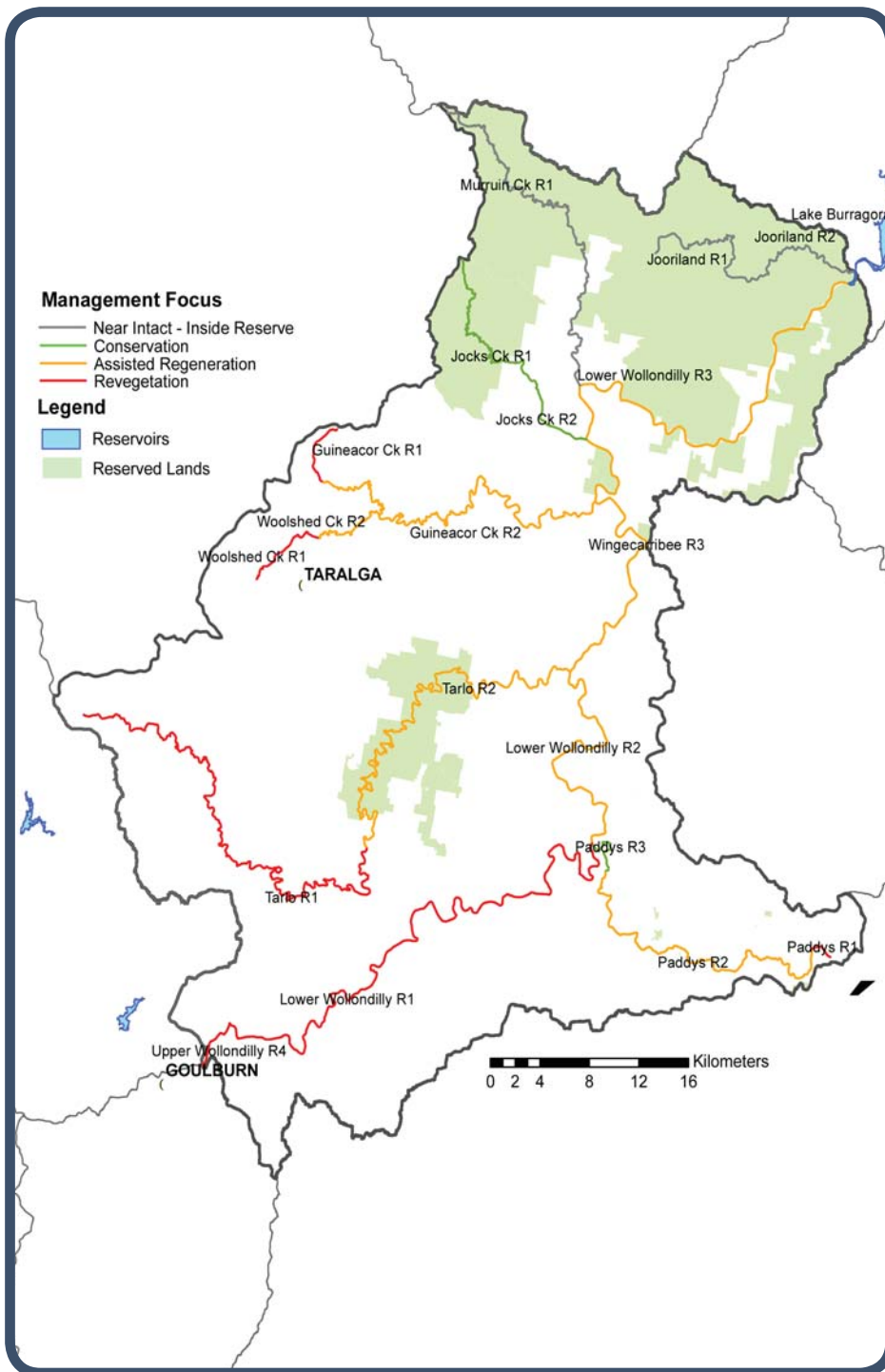


Wollondilly River Subcatchment



At 2699km², the Wollondilly River subcatchment is the largest in the Hawkesbury Nepean catchment. The Wingecarribee and Nattai subcatchments lie to the east, the Upper Wollondilly to the west, Mulwaree to the south-west, and the Kowmung and Lake Burragorang subcatchments to the north.

The Tarlo River National Park protects a section of the major Tarlo tributary (Tarlo R2) and the river flows into the reserved lands associated with Lake Burragorang.

The subcatchment contains significant agricultural lands and associated industries, which were developed early in European settlement and carry through to the current time. As with many such areas, since European settlement the Wollondilly subcatchment has been significantly altered. Significant riparian and floodplain vegetation has been cleared for grazing, native riparian trees were replaced with exotic and invasive Willows (*Salix* spp.) and intact valley fills have been gullied due to changes in runoff.

The subcatchment contains a rare river channel type in Reach 1 of the Tarlo River (Tarlo R1), the “Meandering lateral” river channel type, which is of high environmental significance due to its rarity. Significant community based environment activity exists in the subcatchment.

Reach Management Recommendations – Wollondilly River Subcatchment

Reach Name	Reach Description	Riparian Land Management Category	Reach Values	Reach Threats	Reach management recommendations (Planning, Education, Works, Monitoring, Institutional)
Lower Wollondilly R1	Lower Wollondilly R1, Mulwaree River confluence to Paddy's River confluence.	Revegetation	<ul style="list-style-type: none"> Wetland of local significance Significant vegetation community (Tableland Grassy Box-Gum Woodland; Wollondilly-Shoalhaven Gorge Woodland) Popular recreational fishing Identified flagship species (Pelicans, Black Swans and other water birds) Significant irrigation water supply Significant community based environment activity Town drinking water (Marulan) 	<ul style="list-style-type: none"> High woody weed invasion (willows, blackberry, hawthorn) Aquatic weed outbreaks (Ludwigia and Lagarosiphon) Damaging access (Stock) Erosion below Carrick/Brayton rail bridge. (Causeways that have lifted and moved downstream) Barriers to ecosystem functioning Flow regulation Flow extraction Water quality – STP and diffuse source pollution Urban development – Marulan – hydrological and nutrient impacts <p>Action Triggers</p> <ul style="list-style-type: none"> Severe downstream impact – STP; erosion following willow and blackberry removal 	<ul style="list-style-type: none"> Removal/replacement of exotic riparian vegetation (W) Management of aquatic weeds Management of stock impacts on waterways (W) Encourage adoption of sustainable land management practices in riparian lands (E) Channel bed or bank erosion control works (W) Aquatic habitat condition and connectivity improvement (P,W) Riparian wetland management Water quantity / flow management (I) Water quality / nutrient management (I,W) Urban water quality and sediment management (I,W) Revegetation with indigenous riparian vegetation (W) Maintain existing community environment activity (E,M)
Lower Wollondilly R2	From Paddy's River to Tarlo River. Steep topography & good quality native vegetation.	Assisted Regeneration	<ul style="list-style-type: none"> Good riparian vegetation Good river condition Significant vegetation community (Wollondilly/Shoalhaven Gorge Woodland) Popular recreational fishing Popular non-motor boating Identified flagship species (Platypus) 	<ul style="list-style-type: none"> Damaging access (stock) Barriers to ecosystem functioning Flow regulation Flow extraction Erosion and sediment input from bushfires in steep country 	<ul style="list-style-type: none"> Management of stock impacts on waterways (W) Encourage adoption of sustainable land use practices in riparian lands (P,E) Aquatic habitat condition and connectivity improvement (P,W) Water quantity / flow management (I) Maintenance of recreational values – recreational water quality (M) Increase community capacity for environmental restoration (E) Develop conservation management agreements to protect remnant riparian vegetation (P)

Reach Management Recommendations – Wollondilly River Subcatchment

Reach Name	Reach Description	Riparian Land Management Category	Reach Values	Reach Threats	Reach management recommendations (Planning, Education, Works, Monitoring, Institutional)
Lower Wollondilly R3	Lower Wollondilly R3 from Tarlo River to Lake Burragorang	Assisted Regeneration	<ul style="list-style-type: none"> • Good riparian vegetation • Good river condition • Significant vegetation community (Wollondilly/Shoalhaven Gorge Woodland) • Popular recreational fishing • Popular non-motor boating • Identified flagship species (Platypus) 	<ul style="list-style-type: none"> • Damaging access (stock) • Barriers to ecosystem functioning • Flow regulation • Flow extraction • Erosion and sediment input from bushfires in steep country 	<ul style="list-style-type: none"> • Management of stock impacts on waterways (W) • Encourage adoption of sustainable land use practices in riparian lands (P,E) • Aquatic habitat condition and connectivity improvement (P,W) • Water quantity / flow management (I) • Maintenance of recreational values – recreational water quality (M) • Increase community capacity for environmental restoration (E) • Develop conservation management agreements to protect remnant riparian vegetation (P)
Paddys R1	Short cut and fill reach through the village of Bundanoon, to just below village. Approximately 2.8km long (half urban, half rural).	Revegetation	<ul style="list-style-type: none"> • Wetland of local significance (constructed wetland in creek line) 	<ul style="list-style-type: none"> • Channel engineering / modification (a section of the reach is piped with a playing field on top of it) • Damaging access (stock in rural areas an human in urban areas) • Barriers to ecosystem functioning (pipes) • Flow extraction • Urbanisation and subdivision (Bundanoon) <p>Action Triggers</p> <ul style="list-style-type: none"> • Severe downstream impact – sedimentation and water quality impacts 	<ul style="list-style-type: none"> • Management of stock impacts on waterways (W) • Encourage adoption of sustainable land management practices in riparian lands (E) • Manage human impacts at public recreation river access points and along foreshores (W) • Aquatic habitat condition and connectivity improvement (P,W) • Urban water quality and sediment management (I,W) • Riparian wetland management • Increase community capacity for environmental restoration (E) • Revegetation with indigenous riparian vegetation (W)
Paddys R2	Paddys R2 Long reach from just below Bundanoon Village almost to confluence with Wollondilly, except for short confined reach just above confluence (Paddy's R3)	Assisted Regeneration	<ul style="list-style-type: none"> • Wetland of National Significance (Long Swamp) • Wetlands of local significance (eg. Hanging Rock Swamp) • Significant vegetation community (Tableland Grassy Box-Gum Woodland) • Popular recreational fishing • Identified flagship species (Paddy's River Box) • Significant irrigation water supply 	<ul style="list-style-type: none"> • Damaging access (heavy stock impact, also a point of human impact at the Hume Highway bridge) • Barriers to ecosystem functioning • Flow extraction 	<ul style="list-style-type: none"> • Riparian wetland management • Management of stock impacts on waterways (W) • Encourage adoption of sustainable land management practices in riparian lands (E,P) • Aquatic habitat condition and connectivity improvement (P,W) • Water quantity / flow management (I) • Increase community capacity for environmental restoration (E)

Reach Management Recommendations – Lower Wollondilly River Subcatchment

Reach Name	Reach Description	Riparian Land Management Category	Reach Values	Reach Threats	Reach management recommendations (Planning, Education, Works, Monitoring, Institutional)
Paddys R3	Short reach just before confluence with Wollondilly River; Paddys R3 crossed by Canyonleigh Rd.	Conservation	<ul style="list-style-type: none"> • Good riparian vegetation • Wetland of local significance • Good river condition • High geomorphic recovery potential • Significant vegetation community • Popular recreational fishing • Identified flagship species (Platypus) 	<ul style="list-style-type: none"> • Damaging access (stock and also some human damage at public access point) • Barriers to ecosystem functioning • Flow extraction 	<ul style="list-style-type: none"> • Management of stock impacts on waterways (W) • Encourage adoption of sustainable land use practices in riparian lands (P,E) • Riparian wetland management (P,W) • Water management – quantity (I) • Manage human impacts at public recreation river access points and along foreshores (E,W) • Aquatic habitat condition and connectivity improvement – barriers to fish passage (P,W) • Increase community capacity for environmental restoration (E) • Develop conservation management agreements to protect remnant riparian vegetation (P)
Guineacor R1		Revegetation		<ul style="list-style-type: none"> • Damaging access (heavy stock damage) • Flow extraction 	<ul style="list-style-type: none"> • Management of stock impacts on waterways (W) • Encourage adoption of sustainable land management practices in riparian lands (E) • Water quantity / flow management • Increase community capacity for environmental restoration (E) • Revegetation with indigenous riparian vegetation (W)
Guineacor R2		Assisted Regeneration	<ul style="list-style-type: none"> • Good riparian vegetation • National Park – Wombeyan Caves • Significant vegetation community (Wollondilly – Shoalhaven Gorge Woodland) • Popular recreational fishing • Identified flagship species (National Park) 	<ul style="list-style-type: none"> • Damaging access (human fire trails in granite country) • Barriers to ecosystem functioning • Flow extraction 	<ul style="list-style-type: none"> • Manage human impacts at public recreation river access points and along foreshores (E,W) • Aquatic habitat condition and connectivity improvement (P,W) • Water quantity / flow management (I) • Increase community capacity for environmental restoration (E)
Jocks R1		Conservation (Near Intact and both in and out of reserved lands)			<p>Part of reach in Reserved Land.</p> <ul style="list-style-type: none"> • Develop conservation management agreements to protect remnant riparian vegetation (P)

Reach Management Recommendations – Lower Wollondilly River Subcatchment

Reach Name	Reach Description	Riparian Land Management Category	Reach Values	Reach Threats	Reach management recommendations (Planning, Education, Works, Monitoring, Institutional)
Jocks R2	Jocks R2 partly confined lower section to confluence with Wollondilly River. (Headwater and confined upstream reaches are in near intact condition, so not assessed by Panel.)	Conservation	<ul style="list-style-type: none"> • Good riparian vegetation • Good river condition • Significant vegetation community (Wollondilly-Shoalhaven Gorge Woodland) • Identified Flagship Species (Platypus; Bentwing Bats) • Some community based environment activity (Catchment Protection Scheme) 	<ul style="list-style-type: none"> • Damaging access (stock) • Barriers to ecosystem functioning • Flow extraction • Sediment impacts from upstream 	<ul style="list-style-type: none"> • Management of stock impacts on waterways (W) • Encourage adoption of sustainable land use practices in riparian lands (P,E) • Aquatic habitat condition and connectivity improvement (P,W) • Water management – quantity (I) • Maintain existing community based environment activity (E,P) • Develop conservation management agreements to protect remnant riparian vegetation (P)
Tarlo R1	Includes headwater, partly confined, meandering lateral, partly confined, meandering lateral and partly confined reaches.	Revegetation	<ul style="list-style-type: none"> • Rare or threatened river category (reach contains two 'meandering lateral' sections) • Significant vegetation community • Popular recreational fishing • Identified flagship species (Platypus) • Significant irrigation water supply 	<ul style="list-style-type: none"> • Woody weeds (Crack Willow; Basket Willow; Blackberry) • Damaging access (stock – intensive grazing) • Barriers to ecosystem functioning • Flow modification • Gully erosion contributing sediment to the creek <p>Action Triggers</p> <ul style="list-style-type: none"> • Rare river category (meandering lateral) 	<ul style="list-style-type: none"> • Revegetation with indigenous riparian vegetation (W) • Removal/replacement of exotic riparian vegetation (W) • 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) • Rural water quality and sediment management • Increase community capacity for environmental restoration (E)
Tarlo R2	Includes Tarlo River National Park along a section of the reach. Reach goes all the way to the junction with the Wollondilly River.	Assisted Regeneration	<ul style="list-style-type: none"> • Good riparian vegetation • Wetland of local significance (Long Swamp) • Good river condition • Tarlo River National Park • Popular recreational fishing • Identified Flagship Species (Platypus; National Park Habitat) 	<ul style="list-style-type: none"> • Damaging access (some cattle at lower end. Damaging human access restricted to Swallow Tail Pass) • Barriers to ecosystem functioning • Flow extraction • Subdivision threats from access roads and weeds • Erosion and sediment input from bushfires 	<ul style="list-style-type: none"> • Management of stock impacts on waterways (W) • Encourage adoption of sustainable land use practices in riparian lands (P,E) • Manage human impacts at public recreation river access points and along foreshores (E,W) • Aquatic habitat condition and connectivity improvement (P,W) • Water quantity / flow management (I) • Riparian wetland management (P,W) • Increase community capacity for environmental restoration (E) • Develop conservation management agreements to protect remnant riparian vegetation (P)

Reach Management Recommendations – Wollondilly River Subcatchment

Reach Name	Reach Description	Riparian Land Management Category	Reach Values	Reach Threats	Reach management recommendations (Planning, Education, Works, Monitoring, Institutional)
Woolshed R1		Revegetation	<ul style="list-style-type: none"> Significant vegetation community (Tableland Granite Grassy Woodland) Popular recreational fishing Some community based environment activity Town drinking water (Taralga) 	<ul style="list-style-type: none"> Woody weed invasion (Willow; Hawthorn) Damaging access (stock – severe) Barriers to ecosystem functioning Flow extraction Riparian clearing 	<ul style="list-style-type: none"> Removal/replacement of exotic riparian vegetation (W) 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) Revegetation with indigenous riparian vegetation (W) Water quantity / flow management (I) Increase community capacity for environmental restoration (E)
Woolshed R2		Assisted Regeneration	<ul style="list-style-type: none"> Good riparian vegetation Good river condition Popular recreational fishing 	<ul style="list-style-type: none"> High woody weed invasion Damaging access (stock) Flow extraction Erosion and sediment input from bushfires in steep country 	<ul style="list-style-type: none"> Removal/replacement of exotic riparian vegetation (W) Management of stock impacts on waterways (W) Encourage adoption of sustainable land use practices in riparian lands (P,E) Water quantity / flow management (I) Increase community capacity for environmental restoration (E) Develop conservation management agreements to protect remnant riparian vegetation (P)
Murruin Ck R1		Near Intact (mainly within reserve)			<ul style="list-style-type: none"> Reach mainly within reserved lands. Develop conservation management agreements to protect remnant riparian vegetation (P)

Near Intact Reaches within reserved lands: Jooriland R2, Jooriland R1

Creeks of Community Concern: Tonalli Creek