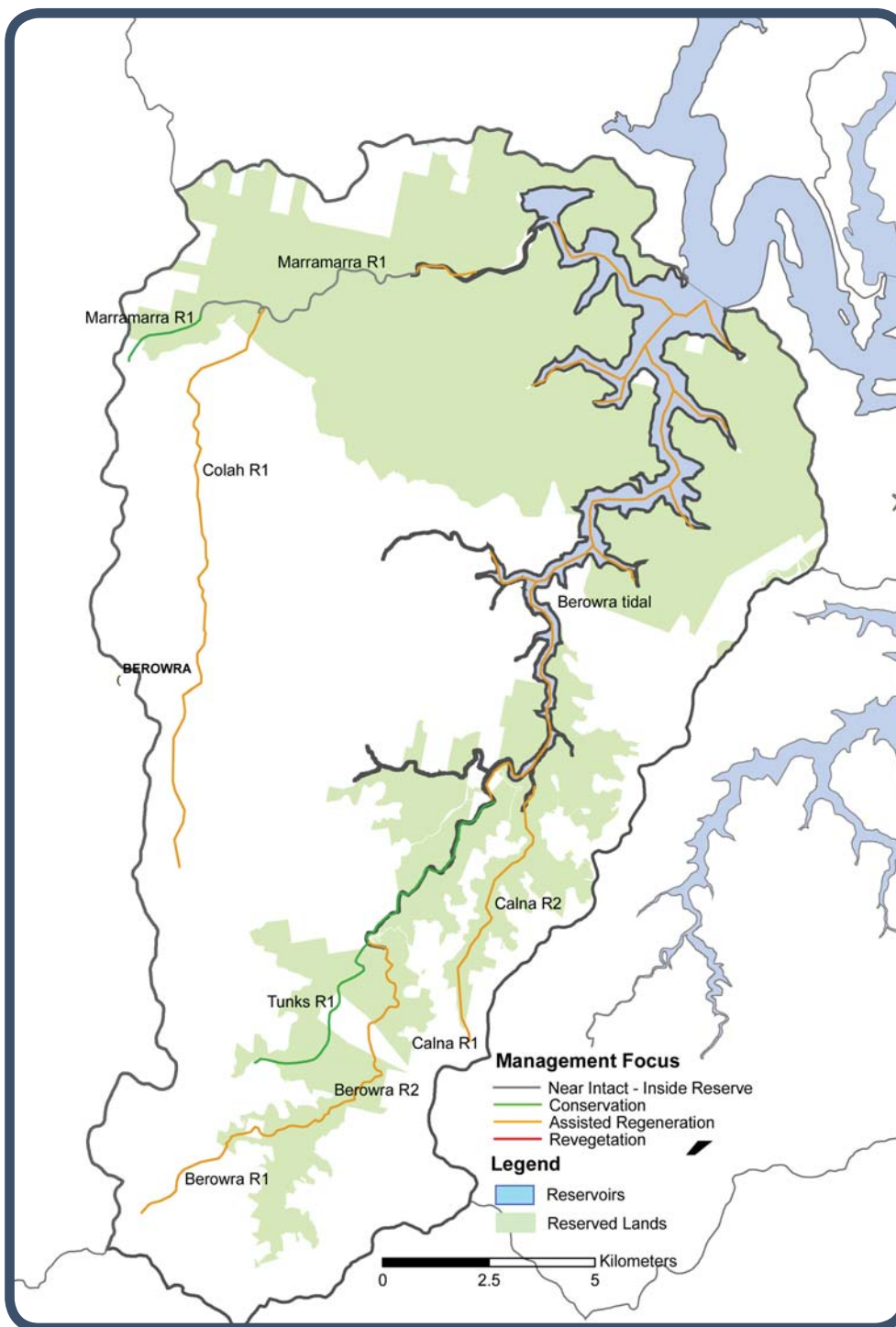


Berowra Creek Subcatchment



The Berowra Creek subcatchment lies between the Cattai subcatchment to the west and Cowan/Pittwater subcatchments to the east. It flows directly into the southern side of the Hawkesbury Estuary. It is a tidal river subcatchment, with 40% of the total stream length having tidal influences.

Much of the lower reaches are located within reserved land (Marramarra National Park and Muogamarra Nature Reserve), while some of the upper reaches are located in Berowra Regional Park.

The headwaters drain rural and residential areas. Two STP's discharge into waterways of the Berowra subcatchment, one on Waitara Creek in West Hornsby, and the other on Calna Creek in Hornsby Heights. Water quality in the subcatchment is generally poor. Significant community based environment activity occurs in the creeks of the subcatchment.

Reach Management Recommendations – Berowra Creek Subcatchment

| Reach Name | Reach Description | Riparian Land Management Category | Reach Values | Reach Threats | Reach management recommendations (Planning, Education, Works, Monitoring, Institutional) |
|------------|---|-----------------------------------|--|---|---|
| Berowra R1 | Headwater section of Berowra Creek down to Boundary Rd at Cherrybrook | Assisted Regeneration | <ul style="list-style-type: none"> • Good riparian vegetation • Identified flagship species – Blue Gum High Forest • Community activity – Streamwatch, bushcare groups • Great North Walk follows this reach | <ul style="list-style-type: none"> • Modified / engineered channel - half the reach is concrete • High woody weed invasion – privet and willow • Aquatic weed outbreaks - Alligator weed (now controlled) • Damaging access (stock and human) • Barriers to ecosystem functioning • Poor water quality – stormwater run off • Urban impacts – sedimentation and poor water quality • Has severe downstream impact – urban impacts alter hydrology, increase nutrients and sediments resulting in poor water quality. • Note: large artificial in-stream wetland for stormwater detention | <ul style="list-style-type: none"> • Removal/replacement of exotic riparian vegetation (W) • Manage human impacts at public recreation river access points and along foreshores (E,W) • Management of aquatic weeds • Aquatic habitat condition and connectivity improvement (P,W) • Urban water quality and sediment management (I,W) • Maintain existing community based environment activity (E,P) |
| Berowra R2 | From end of urban area and headwater down to the tidal limit | Assisted Regeneration | <ul style="list-style-type: none"> • Good riparian vegetation • Significant vegetation community • Popular recreational fishing • Identified flagship species (Australian Bass) | <ul style="list-style-type: none"> • Modified / engineered channel (West Hornsby STP discharge point) • Barriers to ecosystem functioning • Crofton weed and privet present in low densities • Water quality • Urbanisation and sediment impacts | <ul style="list-style-type: none"> • Aquatic habitat condition and connectivity improvement (P,W) • Removal/replacement of exotic riparian vegetation (W) • Urban water quality and sediment management (P,W) • Increase community capacity for environmental restoration (E) |

Reach Management Recommendations – Berowra Creek Subcatchment

| Reach Name | Reach Description | Riparian Land Management Category | Reach Values | Reach Threats | Reach management recommendations (Planning, Education, Works, Monitoring, Institutional) |
|---------------|---|-----------------------------------|--|--|---|
| Berowra Tidal | Tidal sections of Berowra Creek – including tidal section of Marramarra Creek and other Berowra Tributaries. | Assisted Regeneration | <ul style="list-style-type: none"> • Good riparian vegetation • Wetlands of regional or state significance (SREP 20 Wetlands) • Marramarra National Park • Significant vegetation community (Sydney Swamp Forest; Sydney Turpentine Ironbark Forest; Coastal Freshwater Lagoon; Estuarine Saltmarsh • Popular recreational fishing • Popular motor boating • Popular non-motor boating • Popular swimming • High public recreation access (Berowra Waters and Crosslands) • Identified flagship species – Sydney Rock Oyster • River based tourism contributes to regional economy • Commercial fishing (Prawn Trawling) | <ul style="list-style-type: none"> • Water quality • Urbanisation impacts – sedimentation • QX Disease (Oysters) | <ul style="list-style-type: none"> • Water quality / nutrient management (I) • Urban water quality and sediment management (P,W) • Maintenance of recreational values – recreational water quality (M) • Manage human impacts at public recreation river access points and along foreshores (P,W) • Increase community capacity for environmental restoration (E) • Riparian wetland management (P,W) |
| Calna R1 | Short headwater section of Calna Creek running from ridge at Mt Ku-ring-gai for approx. 500 m to boundary of National Park. | Assisted Regeneration | <ul style="list-style-type: none"> • Good riparian vegetation • Scenic quality • Benowie Walking Track | <ul style="list-style-type: none"> • Modified / engineered channel - half the reach is concrete • High woody weed invasion – privet • Aquatic weed outbreaks – <i>Salvinia molesta</i> in dams around creek • Damaging access – walking tracks • Urban impacts – water quality and quantity • Severe downstream impact – urban impacts alter hydrology, increase nutrients and sediments resulting in poor water quality | <ul style="list-style-type: none"> • Removal/replacement of exotic riparian vegetation (W) • Management of aquatic weeds • Manage human impacts at public recreation river access points and along foreshores (E,W) • Urban water quality and sediment management (I,W) • Increase community capacity for environmental restoration (E) |

Reach Management Recommendations – Berowra Creek Subcatchment

| Reach Name | Reach Description | Riparian Land Management Category | Reach Values | Reach Threats | Reach management recommendations (Planning, Education, Works, Monitoring, Institutional) |
|---------------|---|--|---|--|--|
| Calna R2 | From end of urban area and headwater down to the tidal limit through National Park | Assisted Regeneration | <ul style="list-style-type: none"> • Good riparian vegetation • Significant vegetation community • Popular recreational fishing • Identified flagship species (Australian Bass) | <ul style="list-style-type: none"> • Damaging access (Human - Benowie Creek crossings) • Urbanisation – sediment and nutrient impacts | <ul style="list-style-type: none"> • Urban water quality and sediment management (P,W) • Manage human impacts at public recreation river access points and along foreshores (E,W) • Increase community capacity for environmental restoration (E) |
| Colah R1 | Entire length to junction with Marramarra Creek (lower section through Marramarra NP) | Assisted Regeneration | <ul style="list-style-type: none"> • Good riparian vegetation • Significant irrigation water supply – commercial scale horticulture and nurseries • Identified flagship species – diamond python and those associated with Marramarra NP Action Triggers | <ul style="list-style-type: none"> • Modified channel – numerous in-line dams • Aquatic weed outbreaks – <i>Salvinia molesta</i> in dams • Damaging access – horses in headwaters, Benowie Track crossings • Poor water quality – run-off from market gardens • Urban impacts – potential for increased subdivision and sandstone quarrying and associated impacts <p>Action Triggers</p> <ul style="list-style-type: none"> • Severe immediate threat – <i>Salvinia molesta</i> in dams | <ul style="list-style-type: none"> • Management of aquatic weeds • 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 (E,W) • Rural water quality and sediment management (I,W) • Increase community capacity for environmental restoration (E) <p>Bottom section in Marramarra NP.</p> |
| Marramarra R1 | | Conservation (Near Intact partly outside reserves – top section) | | | <ul style="list-style-type: none"> • Develop conservation management agreements to protect remnant riparian vegetation (P) <p>Bottom section of reach in National Park.</p> |
| Tunks R1 | Entire length to junction with Berowra Creek | Conservation | <ul style="list-style-type: none"> • Good riparian vegetation • Good river condition • High geomorphic recovery potential • Identified flagship species (Blue Gum High Forest; Adams Emerald Dragonfly) | <ul style="list-style-type: none"> • Occasional aquatic weed outbreaks (<i>Salvinia</i> in farm dams in catchment) • Flow extraction (drinking water) • Water quality • Subdivision in catchment – sediment and nutrient issues. <p>Action Triggers</p> <ul style="list-style-type: none"> • Severe immediate threat – <i>Salvinia</i> in catchment dams. | <ul style="list-style-type: none"> • Develop conservation management agreements to protect remnant riparian vegetation (P) • Management of aquatic weeds – in catchment dams (E,W,P) • Water management - quantity and quality (I) • Urban water quality and sediment management (I,W) • Increase community capacity for environmental restoration (E) |