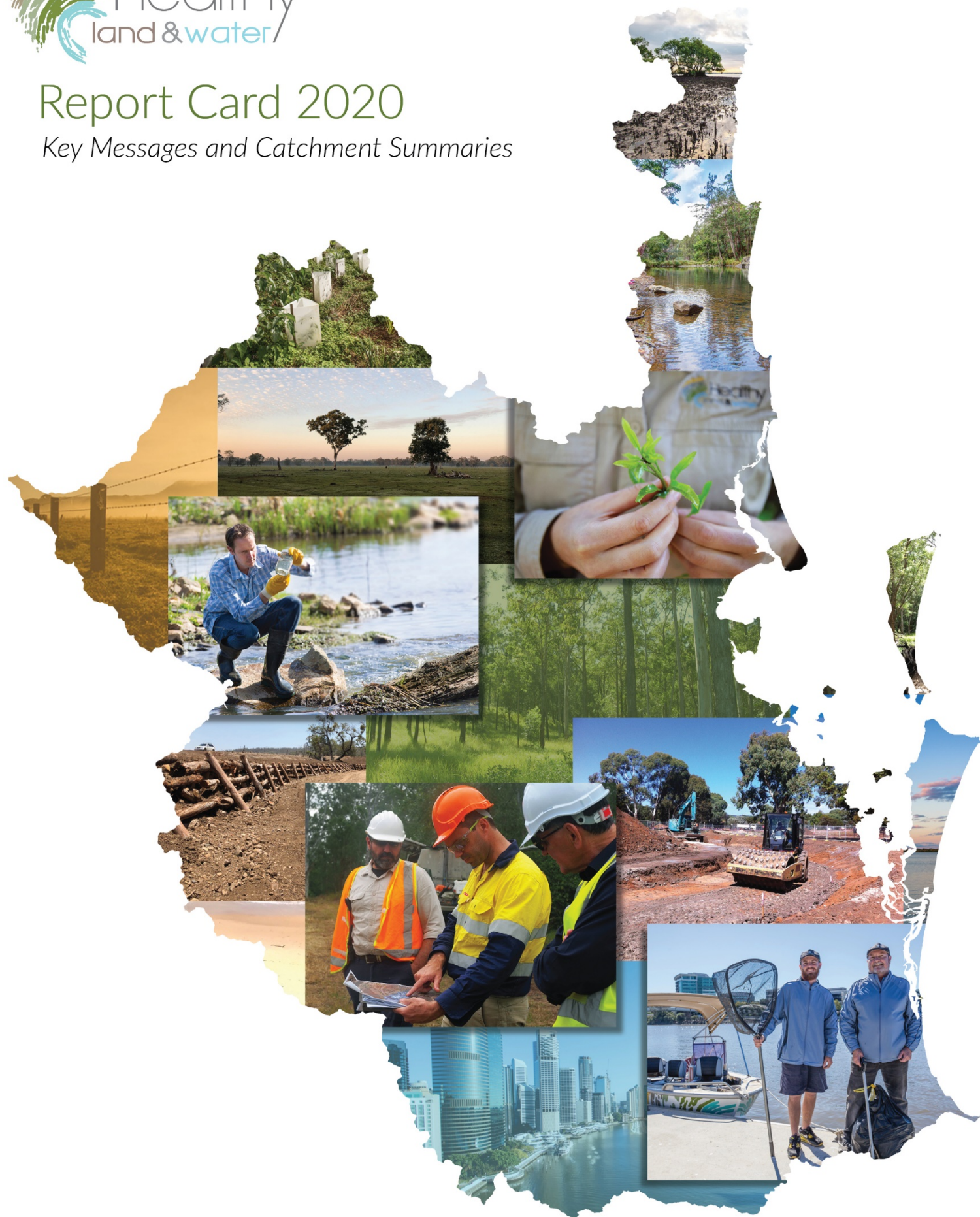


Report Card 2020

Key Messages and Catchment Summaries



Embargo

The promotion of the Report Card Environmental Condition Grades, Waterway Benefit Ratings, and supporting information contained within this document is **embargoed** until the launch on Thursday 05 November 2020.

Acknowledgements

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Traditional Owner Acknowledgement

We acknowledge that the place we now live in has been nurtured by Australia's First Peoples for tens of thousands of years. We believe the spiritual, cultural, and physical consciousness gained through this custodianship is vital to maintaining the future of our region.

For further information about Healthy Land and Water, please email info@hlw.org.au or telephone (07) 3177 9100.

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1 Healthy Land and Water Monitoring Program background

The Healthy Land and Water Monitoring Program is one of the most comprehensive waterway monitoring programs in Australia. The Program delivers a regional assessment of the environmental condition and benefits of waterways for South East Queensland (SEQ) catchments. The results are summarised in an annual Report Card and published on the Healthy Land and Water website, reportcard.hlw.org.au. The program commenced in the late 1990s with this year marking the Report Card's 20th year.

The 2020 Program is the sixth iteration since new measures were introduced in 2015 to focus on additional pressures and to understand the links between water quality and waterway benefits provided to the community. This assessment is undertaken for each of SEQ's 18 major catchments and five zones in Moreton Bay and the Broadwater. A summary of the Report Card Environmental Grades and Waterway Benefit Ratings can be found in Appendix 1.

The Program is managed by Healthy Land and Water on behalf of our member organisations including local and state governments, water utilities, and Seqwater and is delivered with support from scientific expert representatives from government, universities, and industry.

1.1 About the Ecosystem Health Monitoring Program

Healthy Land and Water and its network members are committed to understanding the pressures facing our waterways so we can better protect them for future generations.

- Since 1999, we have conducted a comprehensive monitoring program, and data from the program has been compiled and analysed to form the annual Report Card.
- The Report Card provides an annual assessment of the ecosystem health of South East Queensland's waterways via A-F health grades. The release of the Report Card results is the culmination of twelve months of scientific monitoring at 312 freshwater, estuarine, marine, and event monitoring sites throughout the region. In addition, the Report Card outlines the social and economic benefits that waterways provide to local communities through a 1- 5 star rating.

2 Results – What do they mean?

The 2020 Report Card Environmental Condition Grades and Waterway Benefits Ratings are based on the analysis of data compiled from July 2019 to June 2020.

2.1 Environmental Condition Grade:

The Environmental Condition Grade is comprised of multiple indicators, assessing key freshwater and estuarine aspects of the waterways. Indicators are assessed against established guidelines and benchmarks, resulting in a single grade for each catchment or bay zone. The data used to calculate the 2020 grades has been collected using an integration of computer modelling and field monitoring.

A	Excellent:	Conditions meet all guidelines. All key processes are functional and critical habitats are in near pristine condition.
B	Good:	Conditions meet guidelines for most of the reporting area. Most key processes are slightly impacted, and most critical habitats are intact.
C	Fair:	Conditions are close to meeting guidelines in most of the reporting area. Key processes are impacted but still functional and critical habitats are impacted.
D	Poor:	Conditions meet few of the guidelines in most of the reporting area. Many key processes are not functional and most critical habitats are impacted.
F	Fail:	Conditions do not meet the set guidelines. Most key processes are not functional and most critical habitats are severely impacted.

2.2 Waterway Benefit Rating:

South East Queensland's waterways provide many social and economic benefits to the community through recreation, tourism, fishing, and providing clean drinking water. The Waterway Benefit Rating provides an assessment of these social and economic benefits, which are combined to form an overall rating.

Social - Measures the personal benefits of using waterways, community connection with waterways, community satisfaction with waterways, and the community's ability to access and use waterways.

Economic - Measures the financial benefits generated through recreational use of waterways and recreational fishing, as well as the contribution the catchment makes to providing clean drinking water.

This information was collected through a range of methods including social surveys and economic assessments.

★★★★★	Maximum social and economic benefits
★★★★☆	Very high social and economic benefits
★★★☆☆	High social and economic benefits
★★★☆☆	Moderate social and economic benefits
★★☆☆☆	Minimum social and economic benefits



3 2020 Key Messages

3.1 Local waterways provide refuge for communities during a challenging year of drought, bushfires, COVID-19, and economic uncertainty

- South East Queenslanders have long enjoyed the lifestyle and cultural and economic benefits of the region's expansive, diverse, and scenic waterways (creeks, rivers, lakes, beaches, and bays) and continued to do so during a tumultuous year.
- Waterways are more important than ever, reportedly having a calming, therapeutic, and restorative effect on people during challenging times, including drought, bushfires, and especially COVID-19 and its ensuing economic hardship.
- Opportunities for recreation and social activities such as swimming and fishing are greater in catchments with good water quality. People also enjoy picnicking and exercising alongside waterways and adjacent parks, with walking and cycling activities increasing these past 12 months, contributing to community mental and physical wellbeing.
- Investment in projects to protect and improve catchments and their waterways will continue to support the health of our communities as well as bolster long-term economic recovery. Catchment restoration projects have the potential to generate substantial numbers of jobs for less initial investment than other industries. Catchments in good condition also provide greater support for tourism, farming of agricultural land, and drinking water production, and are more resilient to the impacts of major weather events.

3.2 Overall waterway health trends

- Most western catchments (Upper and Mid Brisbane, Lockyer, and Bremer) remain poor or have declined further. Stanley Catchment is the exception, improving from a B- to a B. The retention of freshwater wetland habitats, and proportionally better riverbank vegetation, as well as benefits to water quality from coastal rainfall, have contributed to the good condition of this catchment.
- Coastal catchments generally remain in moderate to very good condition however rainfall driven pollutants (sediment and nutrients) adversely affected water quality in the Maroochy (B- to C+) and Tallebudgera-Currumbin (B+ to B) Catchments, which declined slightly this year. The Mid Brisbane (C+ to C) also declined due to a further decrease in riparian vegetation since 2013.
- Lower than average rainfall limited river inputs, providing some respite for Moreton Bay. Recent improvement in Bay grades, driven by the flushing of mud out of the bay through oceanic circulation, and by recovery of seagrass, has been maintained in 2020.
- The Broadwater remains in good condition, although a peak in nutrient concentrations (total phosphorus and nitrogen) following significant rainfall events in the Pimpama-Coomera and Nerang catchments, which saw it decline below an A (to B+) for the first time since 2016.
- The Logan (C to C+) and Albert (low B- to high B-) catchments have improved consistently over the past two years, underpinned by improvements in freshwater condition. However, the estuaries remain in fair condition due to increases in nutrients (phosphorus and nitrogen).

3.3 Critical wetland habitats dwindle as the human population increases

- The latest mapping has revealed an overall decline in the extent of freshwater wetlands across most of South East Queensland. Since 2013 alone, there has been a further reduction of 280 hectares of wetlands recorded across the region, with only 45% of pre-clearing wetlands remaining.
- Wetlands are important for reducing floods, improving water quality, providing habitat for animals and plants, and producing clean water and food for humans, industry, and agriculture. Losses are mainly due to the draining and filling or clearing of wetlands for intensive agriculture, infrastructure, and urbanisation in lowland parts of the catchments.
- Despite a decline in wetland habitat extent across most catchments, in the lower estuaries and bay, mangroves are increasing in spatial extent. However, the many benefits of increasing mangrove habitat may be counterbalanced by encroachment in certain specific locations including saltmarshes and unvegetated mud and sand flats. This may lead to reductions in some high tide roosting sites and feeding grounds used by migratory shorebirds, critical to their survival.

3.4 Sources of water pollution require ongoing management to prevent catchment decline

- South East Queensland's water supply mostly flows through the western catchments which are in poor condition, due to long term land use change and environmental conditions (flood, drought, fire). This drives up the cost of producing drinking water with more chemicals required to ensure water is fit for consumption. Investment in improving the condition of the water supply catchments through riparian and wetland restoration, and protection of agricultural land and erosion management will ensure a safe, low cost and secure drinking water supply into the future and will help improve the ecosystem health of Moreton Bay by reducing sediment and mud transfer to the Bay during flood events.
- Considerable improvements in the management of water pollution sources, particularly through advances in wastewater (sewage) treatment, have occurred over the past 20 years. This has resulted in considerable reductions in nitrogen pollution, however ongoing effort is critical to mitigate pressure from population growth and changes in climatic conditions. This includes the management of projected increases in diffuse and point source pollution loads as more people reside in South East Queensland.
- As is typical of low rainfall years, this year we have seen a reduction in catchment flows whilst flows from point sources, such as sewage treatment plants, have generally stayed about the same. This has resulted in discharges from point sources comprising a larger proportion of the total catchment pollution flows to waterways. As such, pollutants (primarily nutrients) have tended to accumulate longer in reaches of waterways adjacent to the point source release points due to this reduction in waterway flushing. Therefore, we saw water quality decline in the Pine, Bremer, Albert, and Logan estuaries with spikes in nutrients downstream of point source discharge points.

4 Overall Moreton Bay

4.1 Environmental Condition (A-)

Moreton Bay remains in excellent condition.

Why?

- Lower than average rainfall limited river inputs this year providing some respite for Moreton Bay. Recent improvement in Bay grades, driven by the flushing of mud out of the bay through oceanic circulation and by recovery of seagrass, has been maintained in 2020.
- Estuarine wetland habitat extent overall maintained and is increasing beyond pre-clearing extent.

4.2 Waterway Benefit Rating (N/A)

The Healthy Land and Water Waterway Benefit Rating is not measured in this area.

4.3 Ways to improve waterway health and benefits

Refer to specific catchment summaries for an overview of management actions to improve waterway health and benefits (Section 10 to 27).

5 Central Bay

5.1 Environmental Condition (A-)

Central Bay remains in excellent condition.

Why?

- Water quality remains excellent however algae (phytoplankton) increased slightly this year.
- Central Bay retains a very high proportion of estuarine wetland habitat (mangroves and saltmarsh) compared to pre-clearing (95%).
- Last year mud reduced significantly from moderate to very low likely due to flushing and resuspensions into the deeper parts of the Bay. A significant "mud patch" remained within the deeper waters of Central Bay, though this had reduced in size since 2015. The next mud assessment will be undertaken during 2022 at which time the results will be updated.
- The extent of seagrass habitat remains moderate and grows at depths of up to 1.5m due to excellent water clarity.

5.2 Waterway Benefit Rating (N/A)

The Healthy Land and Water Waterway Benefit Rating is not measured in this area.

5.3 Ways to improve waterway health and benefits

Refer to specific catchment summaries for an overview of management actions to improve waterway health and benefits (Section 10 to 27).

6 Western Bay

6.1 Environmental Condition (A-)

Western Bay, which includes Bramble, Deception, and Waterloo Bays remains in excellent condition however there were some slight declines across all indicators.

Why?

- Overall water quality remains excellent despite slight increases in nutrients (total nitrogen and total phosphorus) and algae (phytoplankton), and a decrease in water clarity.
- Nutrients (nitrogen and phosphorus) and algae (phytoplankton) increased slightly, and water clarity decreased slightly in Deception Bay as freshwater inflows from the Caboolture River peaked early October 2019 and March 2020.
- Total nitrogen and algae (phytoplankton) increased in Bramble Bay as freshwater inflows from the Pine River, Cabbage Tree Creek, and Brisbane River peaked early March 2020.
- Nutrients (nitrogen and phosphorus) and algae (phytoplankton) increased slightly in Waterloo Bay due to freshwater inflows from Tingalpa Creek and/or Brisbane River which peaked mid March. However, water clarity improved.
- The Western Bay retained a very high proportion of estuarine wetland habitat (mangroves and saltmarsh) compared to pre-clearing (116%).
- Last year mud reduced significantly from moderate to very low likely due to flushing and resuspensions into the deeper parts of the Bay. A significant “mud patch” remained within the deeper waters of Central Bay though this had reduced in size since 2015. The next mud assessment will be undertaken during 2022 at which time the results will be updated.
- Seagrass slightly improved in condition, providing important habitat for marine life and adding value to the fisheries industry of Moreton Bay.

6.2 Waterway Benefit Rating (N/A)

The Healthy Land and Water Waterway Benefit Rating is not measured in this area.

6.3 Ways to improve waterway health

- Careful measures are required to reduce sediment running off development and construction sites, as well as high risk erosion sites (e.g. channel erosion) during rainfall and flooding events. This is critical to maintaining the condition of the Western Bay and retaining the extensive environmental and economic values (e.g. recreation fishing and other waterway-based recreation activities) that currently exist.
- Continued investment in minimising wastewater treatment plant and other industrial discharges, to keep up with population increases and maintain the long-term improvements in water quality of the Western Bay.

7 Eastern Bay

7.1 Environmental Condition (A)

Eastern Bay improved slightly and remains in excellent condition.

Why?

- Water quality remains excellent with improvements (decreases) in total nitrogen recorded.
- Eastern Bay retains a very high proportion of estuarine wetland habitat (mangroves and saltmarsh) compared to the pre-clearing extent (105%).
- Last year mud reduced from low to very low likely due to flushing and resuspensions into the deeper parts of the Bay. The next mud assessment will be undertaken during 2022 at which time the results will be updated.
- Seagrass slightly declined for the Eastern Bay however remains excellent due to very high water clarity.

7.2 Waterway Benefit Rating

The Healthy Land and Water Waterway Benefit Rating is not measured in this area.

7.3 Ways to improve waterway health

- Refer to specific catchment summaries for an overview of management actions to improve waterway health and benefits (Section 10 to 27).

8 Southern Bay

8.1 Environmental Condition (B+)

Southern Bay remains in good condition.

Why?

- Water quality remains excellent despite a slight increase in nutrients (total nitrogen and total phosphorus) and algae (phytoplankton) due to freshwater inflows from the Logan and Albert Rivers mid-February 2020. Water clarity improved slightly.
- The Southern Bay retained a very high proportion of estuarine wetland habitat (mangroves and saltmarsh) compared to pre-clearing (96.8%).
- Ex-Tropical Cyclone Debbie and associated flood waters from the Logan River contributed mud accumulated within the Southern Bay in 2017. Further monitoring undertaken last year indicated that the mud had since improved within some sections of Southern Bay likely due to flushing and resuspensions into the deeper parts of the Bay. The next mud assessment will be undertaken during 2022 at which time the results will be updated.
- Seagrass in Southern Bay improved likely due to limited impacts from discharges from the Logan River.

8.2 Waterway Benefit Rating (N/A)

The Healthy Land and Water Waterway Benefit Rating is not measured in this area.

8.3 Ways to improve waterway health

- Careful measures are required to reduce sediment running off development and construction sites, as well as high risk erosion sites (e.g. channel and gully erosion) during rainfall and flooding events in the upper Logan and Albert catchments. This is critical to maintain the

excellent condition of the Southern Bay and retaining the extensive environmental and economic values (e.g. recreation and commercial fishing) that currently exist.

9 Broadwater

9.1 Environmental Condition (B+)

The Broadwater declined from excellent to good condition for the first time since 2016.

Why?

- Water quality declined this year due to increases in nutrients (total nitrogen and total phosphorous) following significant rainfall events in the Pimpama-Coomera and Nerang Rivers in mid February 2020.
- The Broadwater retained a very high proportion of estuarine wetland habitat (mangroves and saltmarsh) compared to the pre-cleared extent (89.6%).
- Mud has improved since 2015 from low to very low likely due to tidal flushing aiding movement out of the Broadwater.
- Seagrass significantly declined, aligning with the decline in water quality following the February 2020 freshwater flow event.

9.2 Waterway Benefit Rating (N/A)

The Healthy Land and Water waterway Benefit Rating is not measured in this area.

9.3 Ways to improve waterway health

- Careful measures are required to reduce sediment running off development and construction sites, as well as high risk erosion sites (e.g. foreshore and channel erosion) during rainfall and flooding events to maintain the condition of the Broadwater. This is critical to retain the extensive environmental and economic values (e.g. recreation fishing, and other waterway-based recreation activities) that currently exist.

10 Noosa Catchment

10.1 Environmental Condition (A-)

The catchment remains in excellent condition.

Why?

- Pollutant loads remain high in sediment (mud) and nutrients generated from the land (233 to 238 kg/ha of sediment).
- The freshwater creeks remain excellent even though water quality and bug community health declined at Ringtail Creek. This was offset by improvements in fish and bug community health at Burgess Creek.
- Stream bank vegetation in the catchment slightly declined (89% compared to previous year's coverage of 92%). This change is potentially due to improved methodologies impacting results. The overall result for the Noosa River was good. Streambank restoration is currently being implemented through the 'Keeping it in Kin Kin Project' and will be monitored through future Riparian Cover assessments.
- Freshwater wetlands in the catchment declined slightly (88% compared to previous extent of 91%, a loss of 20 hectares), however remain in excellent condition. This change is potentially due to improvements in mapping and methodologies.
- The water quality of the estuary and estuarine lakes improved slightly and remains in excellent condition due to a slight increase in water clarity. Algae (phytoplankton), nutrients (total nitrogen and total phosphorus), and dissolved oxygen remain excellent.

10.2 Waterway Benefit Rating



- Excellent catchment condition results in extremely high numbers of residents satisfied (83%) with their local waterways, in addition to the level of personal benefits local residents gain from using their waterways (78% compared to 61% for all of South East Queensland). Personal benefits arise when waterways act as a place of rest and relaxation or a place to socialise with friends and family.
- Residents report that they value their local waterways for recreation. 42% of residents recreate in or alongside their local waterway at least daily, among the highest within South East Queensland. The top activities include walking or running (102 days/year), enjoying nature (73 days/year), swimming (20 days/year), and picnics/BBQs (16 days/year). The average value of the waterways was \$2,712 per person/year.

10.3 Ways to improve waterway health and benefits

- Reduce sediment loads and nutrients entering waterways by implementing activities in priority catchments (e.g. Kin Kin and Ring Tail Creek) and continue to support catchment management as outlined in the Keeping it in Kin Kin plan. Focusing on engagement and compliance within industries with high soil disturbance such as agriculture and development is critical in the maintenance and improvement of catchment health and water quality values.



- Protect and manage critical habitats within the Noosa catchment including existing critical streambank vegetation and wetlands. Currently 89% of streambanks in the Noosa catchment are vegetated. Over the next 25 years, the population in the Noosa catchment is projected to increase, so protecting and enhancing the condition and access for residents to enjoy their local waterways and natural areas will be critical. Increasing waterway buffers within the peri-urban/agricultural landscape is key to maintaining catchment condition and recreational values.
- Due to increasing population growth in the Noosa region, it is becoming increasingly important to reduce the effects upon the environment from development and recreational activities that have undue impact. Improving development controls and managing current and future recreation is critical in the maintenance and improvement of catchment health and water quality values.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (82%) however, only 52% felt motivated to use and protect waterways. The majority (58%) of Noosa residents reported that they would be likely to clean up sections of their local waterway in the next 12 months and 38% responded that they are likely to become more involved in their local environmental and land care community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including litter, climate change, and the local extinction of native species. 83% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterway. Providing support for residents to make change around their homes, businesses, or in their local waterways is important for improving waterway condition and enhancing waterway stewardship.

11 Maroochy Catchment

11.1 Environmental Condition (C+)

The catchment slightly declined from good to fair condition.

Why?

- Pollutant loads remain very high within the Maroochy Catchment. This is predominantly due to high intensity flood events in January and February that transported sediment (mud) (687 to 785 kg/ha of sediment) from highly urbanised and rural areas.
- The health of freshwater creeks remained excellent despite slight declines in bug community health. This was offset by a slight improvement in fish community health. Water clarity and ecosystem processes remain excellent.
- Freshwater wetlands in the catchments slightly declined (29% compared to previous extent of 32%, a loss of 20 ha). This change is potentially due to improvements in mapping and methodologies. Changes in updated mapping include the freshwater wetlands in Chevallum, Woombye, and Verrierdale.



- Stream bank vegetation in the catchment slightly declined (83% compared to previous year's coverage of 85%) but remains good. This change is potentially due to new methodologies impacting results.
- The health of the estuary declined slightly but remains excellent. The decline was due to an increase in nutrients (total nitrogen and total phosphorus) and decrease in dissolved oxygen, notably in the mid estuary near the Coolool Wastewater Treatment Plant. Water clarity and algae (phytoplankton) improved in the upper estuary.

11.2 Waterway Benefit Rating

- Good catchment condition results in high numbers of residents satisfied (87%) with their local waterways. This is also likely due to very high satisfaction with their ability to access and use local waterways (86% compared to 69% for all of South East Queensland).
- Residents report that they value their local waterways for recreation. 57% of residents recreate in or alongside their local waterway at least monthly. The top activities include walking or running (83 days/year), enjoying nature (56 days/year), swimming (21 days/year), picnics or BBQs (9 days/year), and surfing/kite surfing/sail boarding (12 days/year). The waterway value per person was calculated as \$2,362/year.
- Despite high pollutant loads, the amount of mud removed from drinking water at the treatment plants remains very low compared with previous years. Only 163 kg/ML was removed on average from the Image Flat and Landers Shute drinking water treatment plants this year.

11.3 Ways to improve waterway health and benefits

- Due to increasing population growth in the Maroochy region, it is becoming increasingly important to protect floodplains and manage sediment entering waterways. Improving development controls and changes to hydrology is critical in the maintenance and improvement of catchment health and water quality values. Focusing on engagement and compliance within agricultural landscapes is key to maintaining catchment condition and the recreational values of the catchment.
- Protect and manage critical habitats within the Maroochy catchment including the *Casuarina glauca* community and existing critical streambank vegetation and wetlands. Currently 84% of streambanks in the Maroochy catchment are vegetated. Over the next 25 years, the population in the Maroochy region is projected to increase so protecting and enhancing the condition and access for residents to enjoy their local waterways will be critical. Optimising catchment hydrology and protecting against change is key to maintaining catchment condition and recreational values.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (83%) and 62% felt motivated to use and protect waterways. The majority (62%) of Maroochy residents reported that they would be likely to clean up sections of their local waterway in the next 12 months and 43% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including litter, loss of places of natural beauty, and the local extinction of native species. 83% of residents reported that they would be willing to do something different in their

day to day life if it protected their local waterway. Providing support for residents to make change around their homes, businesses, or in their local waterways is important for improving waterway condition and enhancing waterway stewardship.

12 Mooloolah Catchment

12.1 Environmental Condition (C)

The catchment has declined slightly and remains in fair condition.

Why?

- Pollutant loads remain very high in the Mooloolah catchment. Mooloolah is susceptible to hillslope erosion and landslips in the upper catchment with the significant rainfall event earlier this year potentially activating these high-risk areas.
- The health of freshwater creeks declined from good to fair, due to significant declines in bug health in the Diamond Valley and Meridan Plains. Ecosystem processes and fish community health showed slight improvements.
- Stream bank vegetation in the catchment slightly improved (85% compared to previous year's coverage of 81%). This change is potentially due to new methodologies impacting results. The overall result for the Mooloolah River was good. The occurrence of coastal rainfall in the catchment assisted in maintaining foliage projective cover.
- Freshwater Wetlands in the catchments slightly declined (30% compared to previous years 33%). This change is potentially due to improvements in mapping and methodologies. Changes in updated mapping include the freshwater wetlands in Sippy Downs, Little Mountain, and Tanawha.
- The health of the estuary remains excellent despite a slight increase in total nitrogen and decrease in dissolved oxygen, particularly in the mid to upper reaches of the estuary.

12.2 Waterway Benefit Rating ★★★★★

- Despite only fair catchment condition, very high numbers of residents are satisfied with their local waterways (81% compared with 62% for all of South East Queensland). This is likely due to the community's very high satisfaction with their ability to access and use their local waterways (82%).
- Residents value their local waterways for recreation very highly. 62% enjoy recreating in or alongside their local waterway at least weekly. The most frequent recreation activities include walking/running (84 days/year), enjoying nature (36 days/year), swimming (15 days/year), and cycling (11 days/year). They are also very highly valued as a place of rest and relaxation and for spending time with friends and family. The waterway value per person was calculated as \$2,131/year.

12.3 Ways to improve waterway health and benefits

- Reduce sediment loads and nutrients entering Mooloolah River through catchment protection and the rehabilitation of landslips to prevent surface water pondage on escarpment. Focusing on engagement and compliancy within industries with high soil

disturbance such as agriculture and development is critical in the maintenance and improvement of catchment health and water quality values.

- Protect and manage critical habitats within the Mooloolah catchment including existing critical streambank vegetation and wetlands. Currently 89% of streambanks in the Mooloolah catchment are vegetated. Over the next 25 years, the population in Mooloolah is projected to increase so protecting and enhancing the condition and access for residents to enjoy their local waterways will be critical. Optimising catchment hydrology and protecting against change is key to maintaining catchment condition and recreational values.
- Strengthen local planning and policy instruments to halt the further decline of freshwater wetlands and investigate opportunities for wetland recovery.
- Due to increasing population growth in the Mooloolah region, it is becoming increasingly important to reduce the effects upon the environment from development and recreational activities that have undue impact. Improving development controls and managing current and future recreation is critical in the maintenance and improvement of catchment health and water quality values.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (68%) and 62% felt motivated to use and protect waterways. The majority (59%) of Mooloolah residents reported that they would be likely to clean up sections of their local waterway in the next 12 months and 38% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including litter, climate change, and water pollution. 81% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterway. Providing support for residents to make change around their homes, businesses, or in their local waterways is important for improving waterway condition and enhancing waterway stewardship.

13 Pumicestone Catchment

13.1 Environmental Condition (A-)

The catchment has improved slightly and remains in excellent condition.

Why?

- Pollutant loads remain very low with a slight decrease in sediment generated from the land (117 to 97 kg/ha of sediment).
- Freshwater health remains excellent due to a slight improvement in fish community health, particularly in Bluegum Creek which improved from very poor to excellent. Macroinvertebrate health declined slightly however water quality and ecosystem processes remain excellent.
- Stream bank vegetation in the catchment slightly improved (90% compared to previous year's coverage of 88%). This change is potentially due to new methodologies impacting results. Improvements were noted in the cropping areas around the Glasshouse Mountains. The overall result for the Pumicestone region was good. The occurrence of coastal rainfall in the catchment assisted in maintaining foliage projective cover.
- Freshwater Wetlands in the catchment slightly improved (44% compared to previous extent of 43%, which includes Pumicestone and Bribie Island combined extents).
- The health of the estuary remains excellent despite a slight decline in water clarity and increase in total nitrogen, particularly at Bells Creek. Algae (phytoplankton) and total phosphorus remain excellent, however dissolved oxygen declined slightly in the mid estuary. Seagrass improved this year due to reduced freshwater connection increasing seagrass growth.

13.2 Waterway Benefit Rating



- Excellent catchment condition results in very high numbers of residents (79%) satisfied with their local waterways (compared with 62% for all of South East Queensland).
- Residents report they value their local waterways for recreation. 54% of residents recreate in or alongside their local waterway at least weekly. Very high numbers value them as a place of rest and relaxation (65%) or for social interaction with friends and family (61%). The top activities include walking / running (93 days/year), enjoying nature (51 days/year), cycling (15 days/year), swimming (12 days/year), and fishing (10 days/year). The waterway value per person was calculated as \$3,264.98/year.

13.3 Ways to improve waterway health and benefits

- Over the next 25 years the Moreton Bay Regional Council area is projected to be one of the fastest growing urbanised areas in the region. Given this, it is becoming increasingly important to reduce the effects upon the environment from development activities that have undue impact. Improving development controls and applying water sensitive urban design practices to development is critical in the maintenance and improvement of catchment health and water quality values.



- Reduce sediment loads and nutrients entering the catchment through engagement and compliance within industries with high soil disturbance such as agriculture, forestry, and development. This is critical in the maintenance and improvement of catchment health and water quality values.
- Protect and manage critical habitats within the Pumicestone catchment including coastal saltmarsh and mangrove communities and existing critical streambank vegetation and wetlands. Currently 90% of streambanks in the Pumicestone catchment are vegetated. Over the next 25 years, the population in the Pumicestone region is projected to increase so protecting and enhancing the condition and access for residents to enjoy their local waterways will be critical. Optimising catchment hydrology and protecting against change is key to maintaining catchment condition and recreational values.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (71%) and 55% felt motivated to use and protect waterways. 57% of Pumicestone residents reported that they would be likely to clean up sections of their local waterway in the next 12 months and 46% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including litter, climate change, and water pollution. 80% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterways is important for improving waterway condition and enhancing waterway stewardship.

14 Caboolture Catchment

14.1 Environmental Condition (B+)

The catchment has improved slightly and remains in good condition.

Why?

- Pollutant loads remain low with a slight increase in sediment (mud) and nutrients (172 to 187 kg/ha of sediment).
- Freshwater health improved slightly and remains in excellent condition. Water quality slightly declined however ecosystem processes, fish, and bug community health slightly improved.
- Stream bank vegetation in the catchment slightly declined (83% compared to previous years coverage of 85%). This change has been confirmed through the Statewide Landcover and Tree Study Monitoring Program. The overall result for the Caboolture River was good. Recent investments have occurred in nutrient offsetting through streambank restoration occurring in upper and lower reaches of the catchment. Riparian works will be monitored through future riparian cover assessments.
- Freshwater Wetlands in the catchments slightly declined (30% compared to previous extent of 35%, a loss of 40 hectares). This change is potentially due to improvements in mapping and methodologies. Changes in updated mapping include the freshwater wetlands in Lower Caboolture River, and along Lagoon Creek.



- The health of the estuary remains in excellent condition with a decrease in nutrients (total nitrogen and total phosphorus) and increase in dissolved oxygen. Slight increases in algae (phytoplankton) occurred in the mid reaches of the estuary.

14.2 Waterway Benefit Rating ★★★★★

- Good catchment condition results in high numbers of residents (58%) satisfied with their local waterways (the average for South East Queensland is 62%).
- Residents report that they value their local waterways for recreation. 48% of residents recreate in or alongside their local waterway at least monthly. High numbers value them as a place of rest and relaxation (60%) or for social interaction with friends and family (59%). The top activities include walking or running (51 days/year), enjoying nature (29 days/year), and fishing (12 days/year). The waterway value per person was calculated as \$1,775/year.

14.3 Ways to improve waterway health and benefits

- Over the next 25 years the Moreton Bay Regional Council area is projected to be one of the fastest growing urbanised areas in the region. Given this, it is becoming increasingly important to reduce the effects upon the environment from development activities that have undue impact. Improving development controls and applying water sensitive urban design practices to development is critical in the maintenance and improvement of catchment health and water quality values.
- Protect and manage critical habitats within the Caboolture catchment including coastal saltmarsh, freshwater wetlands, and existing critical streambank vegetation. Currently 83% of streambanks in the Caboolture catchment are vegetated. Reducing the impact of human, cattle, and vehicle access to saltmarsh and riparian zones through the installation of exclusion fencing, signage, education, and surveillance is key to maintaining catchment condition and recreational values.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (69%) however only 36% felt motivated to use and protect waterways. 59% of Caboolture catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 46% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including litter, water pollution, and local extinction of native species. 76% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterways, is important for improving waterway condition and enhancing waterway stewardship.

15 Pine Catchment

15.1 Environmental Condition (B)

The catchment has declined slightly and remains in good condition.



Why?

- Pollutant loads increased due to high intensity flood events in late summer 2020 (49 to 112 kg/ha of sediment). The significant rainfall events in highly urbanised areas may have created flash flooding that transported urban diffuse pollutants from the catchment.
- The health of freshwater creeks improved from fair to good due to slight improvements across all indicators. Fish community health improved, particularly in the lower catchment with reduced proportions of alien fish species.
- Stream bank vegetation in the catchment declined (69% compared to previous year's coverage of 78%). This change is potentially due to new methodologies impacting results. Most of the decline was within the upper reaches of the North Pine River, above North Pine Dam. Targeted weed management occurring along the riparian zone for 'canopy killers' may potentially be showing as initial decline in Foliage projective cover. This is expected to result in improvements to the future foliage projective cover.
- Freshwater wetlands in the catchments slightly declined (21% compared to previous extent of 24%, a loss of 50 hectares). This change is potentially due to improvements in mapping and methodologies. Changes in updated mapping include the freshwater wetlands in Mango Hill, Murrumba Downs, and Bald Hills.
- The health of the estuary declined due to an increase in nutrients (total nitrogen and total phosphorus) and algae (phytoplankton), particularly in the mid estuary adjacent to the Murrumba Downs Wastewater Treatment Plant outfall.

15.2 Waterway Benefit Rating ★★★★★

- Good catchment condition results in high numbers of residents satisfied (64%) with their local waterways. This is also likely due to high satisfaction with their ability to access and use local waterways (72% compared to 69% for all of South East Queensland).
- Residents report that they value their local waterways for recreation. 56% of residents recreate in or alongside their local waterway at least monthly. The top activities include walking or running (61 days/year), enjoying nature (23 days/year), cycling (11 days/year), picnics/BBQs (8 days/year), swimming (6 days/year), and fishing (4 days/year). The waterway value per person was calculated as \$1,541/person.
- Despite increases in pollutant loads this year the amount of mud removed from drinking water at the treatment plant remains very low compared with previous years. On average, only 87 kg/ML was removed from the drinking water treatment plants this year.

15.3 Ways to improve waterway health and benefits

- Over the next 25 years the Moreton Bay Regional Council area is projected to be one of the fastest growing urbanised areas in the region. Given this, it is becoming increasingly important to reduce the effects upon the environment from development activities that have undue impact. Improving development controls and applying water sensitive urban design practices to development is critical in the maintenance and improvement of catchment health and water quality values.
- The population in the Pine region is projected to increase rapidly over the next 25 years so protecting wetlands from clearing and weed infestation is key to maintaining catchment

condition and recreational value in the face of projected increasing population and development. Currently only 21% of freshwater wetland extent remains in the Pine catchment. Reducing further decline of freshwater wetlands and enhancing the condition is critical, particularly in the Pine Rivers.

- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (71%) however only 37% felt motivated to use and protect waterways. 60% of Pine catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 47% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including litter, climate change, and local extinction of native species. 81% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterways is important to improving waterway condition and enhancing waterway stewardship.

16 Lower Brisbane Catchment

16.1 Environmental Condition (D+)

Catchment condition has declined slightly from fair to poor condition.

Why?

- Pollutant loads have increased due to increases in sediment (mud) (152 to 223 kg/ha), total phosphorus (0.33 to 0.50 kg/ha), and total nitrogen loads (2.0 to 3.3kg/ha). This increase is potentially due to prolonged and intense flow events that occurred in February.
- Freshwater health slightly improved in Kedron Brook, Enoggera, and Oxley Creeks due to improvement in most indicators (ecosystem processes and bug and fish community health). Water quality declined slightly.
- The catchment has stable riparian forest cover, with approximately 83% woody vegetation within riparian buffer. The overall result for the Lower Brisbane River tributaries was good. The occurrence of coastal rainfall in the catchment assisted in maintaining foliage projective cover.
- Freshwater Wetlands in the catchments slightly declined (24% compared to previous years 28%). This change represents a loss of 30 hectares and is potentially due to improvements in mapping and methodologies. Changes in updated mapping include the freshwater wetlands in Cabbage Tree Creek, Lower Kedron Brook, Boggy Creek, and Bulimba Creek.
- The health of estuaries (Brisbane, Oxley, and Cabbage Tree Creek) in the catchment remain poor with elevated nutrients in the upper estuarine reaches that could be associated with point source discharges and low flows. Water clarity and dissolved oxygen improved in the mid Brisbane estuary.



16.2 Waterway Benefit Rating

- 56% of residents were satisfied with the condition of their local waterways (compared with 62% for all of South East Queensland). This is likely due to a low level of satisfaction with their ability to access and use their local waterways (64% compared with 69% for all South East Queensland).
- Despite these results, residents still value their local waterways for recreation. 50% of residents enjoy recreating in or alongside their local waterway at least weekly. High numbers of residents value them as a place of rest and relaxation (59%) or for social interaction with friends and family (60%). The most frequent recreation activities include walking/running (65 days/year), enjoying nature (23 days/year), cycling (15 days/year), and picnics/BBQs (6 days/year). The waterway value per person was calculated as \$983/year.

16.3 Ways to improve waterway health and benefits

- Over the next 25 years, the population in the Brisbane City Council area is projected to increase to approximately 1.5 million people. Given this, it is becoming increasingly important to reduce the effects upon the environment from development activities that have undue impact. Improving development controls and applying water sensitive urban design practices to development is critical in the maintenance and improvement of catchment health and water quality values.
- The protection and management of natural areas and waterway corridors is important for Brisbane's biodiversity, waterway health, community conservation, and nature-based recreation.
- The population in the Lower Brisbane catchment is projected to increase rapidly over the next 25 years so protecting wetlands from clearing and weed infestation is key to maintaining catchment condition and recreational value in the face of projected increasing population and development. Currently only 24% of freshwater wetland extent remains in the Lower Brisbane catchment. Reducing further decline of freshwater wetlands particularly and enhancing the condition is critical.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (70%) however only 33% felt motivated to use and protect waterways. 60% of Lower Brisbane catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 39% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including litter, climate change, and local extinction of native species. 82% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterway, is important for improving waterway condition and enhancing waterway stewardship.



17 Redland Catchment

17.1 Environmental Condition (C+)

The catchment has declined slightly though remains in fair condition.

Why?

- Pollutant loads increased but remain very low due to increased sediment (mud) from the land (106 to 235 kg/ha of sediment). The significant rainfall events in highly urbanised areas may have created flash flooding that transported urban diffuse pollutants from the catchment.
- Freshwater health remains very poor due to a decline in fish community health. Bug community health and water quality remain stable and ecosystem processes has improved slightly.
- Stream bank vegetation in the catchment slightly declined (84% compared to previous years coverage of 86%). This change is potentially due to new methodologies impacting results. Changes were noted in the southern Redlands, from Mount Cotton to Redland Bay. The overall result for the Redland tributaries was good.
- Freshwater Wetlands in the catchments remained stable (45%).
- Redland estuaries (Eprapah and Tingalpa Creeks) improved though remain fair. Significant improvement in water clarity, particularly in Eprapah Creek, offset an increase in total phosphorus. Very little change occurred in Tingalpa Creek.

17.2 Waterway Benefit Rating ★★★★★

- Despite fair catchment condition, high numbers of residents (66%) are satisfied with their local waterways (compared with 62% for all of South East Queensland).
- Residents report that they value their local waterways for recreation. 60% of residents recreate in or alongside their local waterway at least monthly. Very high numbers value them as a place of rest and relaxation (70%) or for social interaction with friends and family (64%). The top activities include walking/running (79 days/year), enjoying nature (30 days/year), cycling (13 days/year), picnics/BBQs (8 days/year), and swimming (4 days/year). The recreational value per person was valued at \$1,835/person.
- An increase in pollutant loads this year contributed to increases in the amount of mud removed from drinking water at the treatment plants. Additionally, the North Stradbroke water treatment plant lagoon was cleaned out completely for the first time since this indicator was incorporated in the Report Card, affecting the results with higher than usual sludge recorded per ML of drinking water produced. On average 556 kg/ML of sludge was removed from the Capalaba and North Stradbroke water treatment plants this year.

17.3 Ways to improve waterway health and benefits

- Protect and manage critical habitats within the Redlands catchment including remnant vegetation throughout Mount Cotton and existing critical streambank vegetation and wetlands. Currently 84% of streambanks in the Redlands catchment are vegetated. Over the next 25 years, the population in the Redlands is projected to increase so protecting and enhancing the condition and access for residents to enjoy their local waterways will be

critical. Increasing waterway buffers within the peri-urban/agricultural landscape is key to maintaining catchment condition and recreational values.

- The Redlands catchment population is expected to increase to approximately 188,000 in the next 25 years. Given this, it is becoming increasingly important to reduce the effects upon the environment from development activities that have undue impact. Improving development controls and applying water sensitive urban design practices to development is critical in the maintenance and improvement of catchment health and water quality values.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (74%), however only 41% felt motivated to use and protect waterways. The majority (61%) of Redlands residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 40% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including litter, climate change, and the local extinction of native species. 81% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterways is important for improving waterway condition and enhancing waterway stewardship.

18 Mid Brisbane Catchment

18.1 Environmental Condition (C)

The catchment has declined slightly though remains in fair condition.

Why?

- Pollutant loads remain very low with only slight changes to sediment (mud) and nutrient loads this year (9.5 kg/ha to 10kg/ha of sediment).
- The health of freshwater creeks maintained their fair condition with slight improvements in water quality, ecosystem processes, and fish community health. Bug community health remains excellent.
- Stream bank vegetation in the catchment slightly declined (71% compared to previous years coverage of 74%). Riparian loss was impacted by 2011 and 2013 flood events and the riparian area is slow to recover due to drought impacts in the western catchments.
- Freshwater Wetlands in the catchments remained stable (23%). Flood events in 2011 and 2013, in addition to drought conditions, continue to impact on the freshwater wetlands.

18.2 Waterway Benefit Rating ★★☆☆☆

- Low numbers of residents were satisfied (36%) with their local waterways. This is likely due to only fair catchment condition. Despite this, residents reported high satisfaction with their ability to access and use local waterways (61% compared to 69% for all of South East Queensland).



- Residents report that they value their local waterways for recreation. 36% of residents recreate in or alongside their local waterway at least monthly. The top activities include enjoying nature (24 days/year), walking or running (6 days/year), and rowing, kayaking, and canoeing (1 day/year). The recreational value per person was valued at \$129/person.
- Pollutant loads running off the catchment remain low, though the amount of mud removed from drinking water at the treatment plants increased this year. On average 461 kg/ML was removed from drinking water at the Lowood, Mount Crosby Eastbank, and Mount Crosby Westbank water treatment plants, increasing treatment costs this year.

18.3 Ways to improve waterway health and benefits

- Reduce sediment loads and nutrients entering the Mid Brisbane catchment through catchment protection and addressing channel and gully erosion. Focusing on improved engagement and compliancy within industries with high soil disturbance such as agriculture, peri urban development, and other development activities is critical in the maintenance and improvement of catchment health and water quality values.
- Protect and manage critical habitats within the Mid Brisbane catchment including critical streambank vegetation and wetlands. Currently 71% of streambanks in the Mid Brisbane catchment are vegetated. Protecting and enhancing the condition and access for residents to enjoy their local waterways will be critical.
- Protecting wetlands from clearing and weed infestation is key to maintaining catchment condition and recreational value in the face of projected increasing population and development. Currently only 23% of freshwater wetland extent remains in the Mid Brisbane catchment. Reducing further decline of freshwater wetlands particularly and enhancing the condition is critical.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (68%), however only 23% felt motivation to use and protect waterways. 73% of Mid Brisbane catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 59% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including litter, climate change, and local extinction of native species. 82% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterways is important for improving waterway condition and enhancing waterway stewardship.

19 Upper Brisbane Catchment

19.1 Environmental Condition (D)

The catchment remains in poor condition.

Why?



- The Upper Brisbane catchment lies within the driest area of South East Queensland. This is attributed to low pollutant loads across the catchment, despite slight increases in sediment (mud) (19 to 38 kg/ha) and nutrients.
- Freshwater health significantly improved this year though remains very poor. Water quality ecosystem processes and bug and fish community health all improved. 13 of the sampling sites for ecosystem processes scored very highly, potentially due to slight increases in flow prior to sampling.
- Stream bank vegetation in the catchment slightly declined (59% compared to previous year's coverage of 63%). This change was confirmed through the Statewide Landcover and Tree Study Program. Riparian loss was impacted by 2011 and 2013 flood events and the riparian area is slow to recover due to drought impacts in the western catchments.
- Freshwater Wetlands in the catchment remained stable (23%).

19.2 Waterway Benefit Rating ★★☆☆☆

- Poor catchment condition results in only moderate numbers of residents (45%) satisfied with their local waterways.
- Despite these results, residents still value their local waterways for recreation. High numbers of residents (55%) valued their local waterway as a place of rest and relaxation or for social interaction with friends and family (45%). Residents reported their recreational use of local waterways was predominantly walking or running (5 days/year) and enjoying nature (4 days/year). The recreational value per person was valued at \$126/year.
- The catchment is the major drinking water supply catchment for Brisbane City. The amount of mud removed from drinking water was slightly higher with 1,767 kg/ML compared to 1,340kg/ML last year.

19.3 Ways to improve waterway health and benefits

- Reduce sediment loads and nutrients entering the Upper Brisbane catchment through catchment protection, grazing land management programs, and addressing channel and gully erosion.
- Protect and manage critical habitats within the Upper Brisbane catchment including existing streambank vegetation and freshwater wetlands. Currently 59% of streambanks in the Upper Brisbane catchment are vegetated. Protecting and enhancing the condition and access for residents to enjoy their local waterways will be critical.
- Protecting wetlands from clearing and weed infestation is key to maintaining catchment condition and recreational value in the face of projected increasing population and development. Currently only 23% of freshwater wetland extent remains in the Upper Brisbane catchment. Reducing further decline of freshwater wetlands particularly and enhancing the condition is critical.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (90%) however only 20% felt motivated to use and protect waterways. 69% of Upper Brisbane catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 59%

responded that they are likely to become more involved in their local environmental community group.

- Incentivise changes to community behaviour relating to identified top environmental issues of concern including weeds/pests and water supply/drought. 93% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterways is important for improving waterway condition and enhancing waterway stewardship.

20 Stanley Catchment

20.1 Environmental Condition (B)

The catchment has improved slightly and remains in good condition.

Why?

- Pollutant loads remain very low despite slight increases in sediment (mud) and nutrient loads (57 to 65 kg/ha of sediment).
- The health of freshwater creeks remains good due to slight improvements in ecosystem processes and water quality. However, bug community health declined slightly.
- Stream bank vegetation in the catchment slightly declined (64% compared to previous year's coverage of 69%). This change was confirmed through the Statewide Landcover and Tree Study Program. Riparian loss was impacted by 2011 and 2013 flood events and the riparian area is slow to recover due to drought impacts. Targeted weed management occurring along the riparian zone for 'canopy killers' may potentially be showing as initial decline in Foliage projective cover. This is expected to result in improvements to the future foliage projective cover.
- Freshwater Wetlands in the catchment significantly improved (72% revised extent). This change is potentially due to improvements in mapping and methodologies. New areas included in updated mapping include Beerwah, Stanmore, and Burgalba Lagoon.

20.2 Waterway Benefit Rating ★★★★★

- Good catchment condition results in high numbers of residents satisfied with the usability of their waterways (74%) and access (74%). Residents reported high levels of personal connection with nature (97% compared to 72% for all of South East Queensland).
- Residents report that they value their local waterways for recreation. This year 41% of residents enjoyed recreating in or alongside their local waterway at least weekly. The most frequent recreation activities include enjoying nature (61 days/year), walking or running (41 days/year), and cycling (3 days/year). The recreational value per person was valued at \$474/year.
- The amount of mud removed from drinking water was slightly lower than last year.

20.3 Ways to improve waterway health and benefits

- Reduce sediment loads and nutrients entering the Stanley catchment through catchment protection and focusing on improved engagement and compliancy within industries with

high soil disturbance such as agriculture and development is critical in the maintenance and improvement of catchment health and water quality values.

- Protect and manage critical habitats within the Stanley catchment including existing streambank vegetation and wetlands. Currently 64% of streambanks in the Stanley catchment are vegetated. Protecting and enhancing the condition and access for residents to enjoy their local waterways will be critical.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (97%) and 50% felt motivated to use and protect waterways. 62% of Stanley catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 50% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including tree clearing, weeds/pests, and climate. 88% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterways is important for improving waterway condition and enhancing waterway stewardship.

21 Lockyer Catchment

21.1 Environmental Condition (D-)

The catchment has declined slightly and remains in poor condition.

Why?

- Pollutant loads remain very low due to drought conditions despite a slight increase in sediment (mud) and nutrients (3 to 6 kg/ha).
- Freshwater health has slightly improved though remains in very poor condition. An improvement was seen across all indicators except fish communities, which slightly declined. Four of the seven sites showed high scoring for ecosystem processes.
- The catchment has a stable riparian forest cover, with approximately 70% woody vegetation within the riparian buffer. Drought conditions continue to impact on riparian health in addition to the foliage projective cover. Some positive change along the main channel of Laidley Creek was noted, which has been a focus of targeted riparian works and nutrient offsetting since 2014.
- Freshwater Wetlands in the catchment slightly declined (32% compared to previous years 36%). This change is potentially due to improvements in mapping and methodologies. Flood events in 2011 and 2013 in addition to drought conditions continue to impact freshwater wetlands. Changes in updated mapping include the freshwater wetlands in Seven Mile Lagoon, Lower Buaraba Creek, and Rifle Range.

21.2 Waterway Benefit Rating ★★☆☆☆

- Poor catchment condition results in only moderate numbers of residents (39%) satisfied with their local waterways.



- Despite these results, residents still value their local waterways for recreation. High numbers of residents (45%) valued their local waterway as a place of rest and relaxation or for social interaction with friends and family (39%). 36% of residents enjoy recreating in or alongside their local waterway at least monthly. The most frequent recreation activities include walking or running (27 days/year) and enjoying nature (18 days/year). The recreational value per person was valued at \$337/year.

21.3 Ways to improve waterway health and benefits

- Reduce sediment loads and nutrients entering the Lockyer catchment through catchment protection, bank stabilisation, and improved land management practices. Focusing on improved engagement and compliancy within industries with high soil disturbance such as agriculture and development is critical in the maintenance and improvement of catchment health and water quality values.
- Protect and manage critical habitats within the Lockyer catchment including existing streambank vegetation and wetlands. Currently 70% of streambanks in the Lockyer catchment are vegetated. Protecting and enhancing the condition and access for residents to enjoy their local waterways will be critical.
- Protecting wetlands from clearing and weed infestation is key to maintaining catchment condition and recreational value in the face of projected increasing population and development. Currently only 32% of freshwater wetland extent remains in the Lockyer catchment. Reducing further decline of freshwater wetlands particularly and enhancing the condition is critical.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (66%) however only 16% felt motivated to use and protect waterways. 63% of Lockyer catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 41% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including weeds/pests, litter pollution and water supply/drought. 85% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterways is important for improving waterway condition and enhancing waterway stewardship.

22 Bremer Catchment

22.1 Environmental Condition (D)

The catchment has declined slightly and remains in poor condition.

Why?

- Pollutant loads remain very low in the Bremer catchment despite slight increases in sediment (mud) and nutrients (38 to 46 kg/ha).



- Freshwater health improved slightly though remains in poor condition. Fish community health, water quality and ecosystem processes downstream of Lake Moogerah in the Warrill and Reynolds Creeks improved. Bug community health declined slightly.
- Stream bank vegetation in the catchment slightly declined (55% compared to previous year's coverage of 56%). This change was confirmed through the Statewide Landcover and Tree Study Program. Riparian loss was impacted by 2011 and 2013 flood events and the riparian area is slow to recover due to drought impacts.
- Freshwater Wetlands in the catchment slightly declined (46% current extent with a loss of 20 hectares). This change is potentially due to improvements in mapping and methodologies. Changes in updated mapping include the freshwater wetlands in the Lower Mount Walker floodplains, Mutdapilly, and Ten Mile Swamp.
- The health of the upper estuary declined from good to fair due to an increase in nutrients (total nitrogen and phosphorus) that could be associated with point source discharges and low flows, increasing the accumulation of nutrients within the estuary. Water clarity and dissolved oxygen in the lower reaches of the estuary improved.

22.2 Waterway Benefit Rating ★★☆☆☆

- Poor catchment condition results in only moderate numbers of residents (39%) that are satisfied with the usability and accessibility of their local waterways (compared with 69% for all of South East Queensland).
- Despite this, residents report that they do value their local waterways for recreation. 27% recreate in or alongside their local waterway on a monthly basis. Residents reported their recreational use of local waterways was predominantly walking or running (17 days/year), enjoying nature (9 days/year), and cycling (5 days/year). The recreational value per person was valued at \$552/year.
- The Boonah-Kalbar treatment plant lagoon was not cleaned this year and therefore the amount of mud removed from drinking water at the Boonah-Kalbar treatment plant was recorded as 0 kg/ML compared to last year (2,154 kg/ML).

22.3 Ways to improve waterway health and benefits

- Reducing sediment loads and nutrients entering the Bremer catchment through catchment protection, bank stabilisation, gully repair, and improved land management practices. Focusing also on improved engagement and compliancy within industries with high soil disturbance such as agriculture and development is critical in the maintenance and improvement of catchment health and water quality values.
- Over the next 25 years Ipswich City Council area is projected to be one of the fastest growing urbanised areas in SEQ so protecting and managing critical habitats within the Bremer catchment including existing streambank vegetation and wetlands is critical for mitigating the increasing pressures that come with expansion. Currently 55% of streambanks in the Bremer catchment are vegetated. Protecting and enhancing the condition and access for residents to enjoy their local waterways is key to maintaining catchment condition.
- Protecting wetlands from clearing and weed infestation is key to maintaining catchment condition and recreational value in the face of projected increasing population and

development. Currently only 46% of freshwater wetland extent remains in the Bremer catchment. Reducing further decline of freshwater wetlands particularly and enhancing the condition is critical.

- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (64%) however only 16% felt motivated to use and protect waterways. 66% of Bremer catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 46% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including weeds/pests, litter pollution and water supply/drought. 87% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterways is important for improving waterway condition and enhancing waterway stewardship.

23 Logan Catchment

23.1 Environmental Condition (C+)

Catchment condition improved slightly though remains in fair condition.

Why?

- Pollutant loads increased but remain very low due to a slight increase in sediment (mud) (34 to 75 kg/ha), total phosphorus (0.06 to 0.15 kg/ha), and total nitrogen loads (0.43 to 1.24kg/ha).
- Freshwater health slightly improved, though remains in poor condition. Water quality, ecosystem processes, and fish community health all slightly improved. Upper catchment sites showed greater signs of improvement compared with the lower catchment sites.
- Stream bank vegetation in the catchment slightly declined (66% compared to previous years coverage of 69%). A flood event in 2017 affected some of the losses within the catchment. Targeted weed management occurring along the riparian zone for 'canopy killers' may potentially be showing as initial decline in Foliage projective cover. This is expected to result in improvements to the future foliage projective cover.
- Freshwater Wetlands in the catchment remains stable (28%). This change is potentially due to improvements in mapping and methodologies. Changes in updated mapping include the freshwater wetlands in the Lower Logan reaches.
- Estuarine health declined to poor due to increase in nutrients (total nitrogen and phosphorus) in the upper reaches that could be associated with point source discharges and low flows. It was offset by a decrease in algae (phytoplankton) in the mid reaches of the estuary.

23.2 Waterway Benefit Rating ★★☆☆☆

- The fair catchment condition results in only moderate numbers of residents (51%) satisfied with the usability and accessibility of their local waterways (compared with 69% for all of South East Queensland).



- Despite this, residents report that they do value their local waterways for recreation. 41% of people recreate in or alongside their local waterway on a monthly basis or more. The top activities include walking or running (41 days/year), enjoying nature (16 days/year), picnicking (7 days/year), and cycling (7 days/year). The recreational value per person was valued at \$964/year.
- An increase in pollutant loads generated from the catchment this year means that the amount of mud removed from drinking water at the Beaudesert treatment plant increased (352 kg/ML to 425 kg/ML).

23.3 Ways to improve waterway health and benefits

- Reduce sediment loads and nutrients entering the Logan catchment through catchment protection, bank stabilisation, gully repair, and improved land management practices. Focusing on improved engagement and compliancy within industries with high soil disturbance such as agriculture and development is critical in the maintenance and improvement of catchment health and water quality values.
- Over the next 25 years the Logan City Council area is projected to be one of the fastest growing urbanised areas in South East Queensland, so protecting and managing critical habitats within the catchment including existing streambank vegetation and wetlands is critical for mitigating the increasing pressures that come with expansion. Currently 66% of streambanks in the Logan catchment are vegetated. Protecting and enhancing the condition and access for residents to enjoy their local waterways is key to maintaining catchment condition.
- Protecting wetlands from clearing and weed infestation is key to maintaining catchment condition and recreational value in the face of projected increasing population and development. Currently only 28% of freshwater wetland extent remains in the Logan catchment. Reducing further decline of freshwater wetlands particularly and enhancing the condition is critical.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (71%) however only 24% felt motivated to use and protect waterways. 64% of Logan catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 44% responded that they are likely to become more involved in their local environmental/landcare community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including local extinctions of native species, tree clearing, and climate change. 82% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterways is important for improving waterway condition and enhancing waterway stewardship.

24 Albert Catchment

24.1 Environmental Condition (B-)

Catchment condition has improved slightly and remains in good condition.



Why?

- Pollutant loads significantly increased due to increases sediment (mud) (35 to 142 kg/ha), total phosphorus (0.06 to 0.21 kg/ha), and total nitrogen loads (0.45 to 1.65kg/ha). A high flow was recorded this year with the peak reaching 14.5m compared to last year which experienced numerous flow events with peak water levels of only 3.5m.
- The health of freshwater creeks remains poor despite slight improvements across all indicators except bug community health which remains excellent.
- The catchment has a stable riparian forest cover, with approximately 73% woody vegetation within the riparian buffer. A flood event in 2017 affected some of the losses and gains within the catchment.
- Freshwater Wetlands in the catchments remain stable (31%). This change is potentially due to improvements in mapping and methodologies. Changes in updated mapping include the freshwater wetlands in the Lower Albert and Eagleby.
- Estuarine health declined due to a decline in water clarity and a decrease in dissolved oxygen and increases in nutrients (total nitrogen and phosphorus) in the mid reaches of the estuary. However, algae (phytoplankton) improved in the upper and mid reaches of the estuary.

24.2 Waterway Benefit Rating

- Good catchment condition results in 59% of people satisfied with the usability and accessibility of their local waterways (compared with 69% for all South East Queensland).
- Residents report that they value their local waterways for recreation. 45% recreate in or alongside their local waterway on a monthly basis or more. Residents reported their recreational use of local waterways was predominantly walking or running (38 days/year) and enjoying nature (36 days/year). The recreational value per person was valued at \$552/year.
- Despite increases in pollutant loads this year, the amount of mud removed from drinking water at the treatment plant remains very low compared with previous years (136 kg/ML in 2019 to 85 kg/ML in 2020).

24.3 Ways to improve waterway health and benefits

- Reduce sediment loads and nutrients entering the Albert catchment through catchment protection, bank stabilisation, and improvements to riparian condition. Focusing on improved engagement and compliancy within industries with high soil disturbance such as agriculture and development is critical in the maintenance and improvement of catchment health and water quality values.
- Protecting and managing critical habitats within the catchment including existing streambank vegetation and wetlands is critical for mitigating the increasing pressures that come with population expansion. Currently 73% of streambanks in the Albert catchment are vegetated. Protecting and enhancing the condition and managing disturbance in the riparian zones is key to maintaining catchment condition.
- Protecting wetlands from clearing and weed infestation is key to maintaining catchment condition and recreational value in the face of projected increasing population and



development. Currently only 31% of freshwater wetland extent remains in the Albert catchment. Reducing further decline of freshwater wetlands particularly and enhancing the condition is critical.

- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (75%) however only 25% felt motivated to use and protect waterways. 65% of Albert catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 43% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including litter, climate change, and loss of places of natural beauty. 85% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterway is important for improving waterway condition and enhancing waterway stewardship.

25 Pimpama-Coomera Catchment

25.1 Environmental Condition (B)

The catchment has improved slightly and remains in good condition.

Why?

- Pollutant loads increased within the catchment, from very low to moderate. This is due to high intensity flood events in January and February that transported sediment (mud) (121 to 321 kg/ha of sediment) from highly urbanised areas.
- Freshwater health improved slightly, mainly due to improvements in water quality, ecosystem processes, and bug community health. Fish community health slightly declined.
- Stream bank vegetation in the catchment improved (86% compared to previous years coverage of 76%). This change is potentially due to new methodologies impacting results. The overall result for the Pimpama-Coomera Rivers was good. The occurrence of coastal rainfall in the catchment assisted in maintaining foliage projective cover.
- Freshwater wetlands in the catchment slightly declined (20% compared to previous year's 22%, a loss of 50 hectares). This change is potentially due to improvements in mapping and methodologies.
- Estuarine health remains excellent despite increases in total nitrogen and algae (phytoplankton) offset by a decrease in total phosphorus and improvement in dissolved oxygen.

25.2 Waterway Benefit Rating ★★★★★

- Good catchment condition is reflected in the high number of residents (79%) satisfied with the usability and accessibility of their local waterways (compared with 69% for all of South East Queensland).
- Residents value their local waterways for recreation with 74% recreating in or alongside their local waterway on a monthly basis. The top activities include walking or running (83

days/year), enjoying nature (40 days/year), swimming (16 days/year), and cycling (11 days/year). The recreational value per person was valued at \$2,943/year.

25.3 Ways to improve waterway health and benefits

- Over the next 25 years, the Pimpama-Coomera catchment is projected to be one of the fastest growing urbanised areas in the City of Gold Coast area. Given this, it is becoming increasingly important to reduce the effects upon the environment from development activities that have undue impact. Improving development controls and applying water sensitive urban design practices to development is critical in the maintenance and improvement of catchment health and water quality values.
- Protecting and managing critical habitats within the catchment including existing streambank vegetation and wetlands is critical for mitigating the increasing pressures that come with population expansion. Currently 76% of streambanks in the Pimpama-Coomera catchment are vegetated. Protecting and enhancing the condition and managing disturbance in the riparian zones is key to maintaining catchment condition.
- Protecting wetlands from clearing and weed infestation is key to maintaining catchment condition and recreational value in the face of projected increasing population and development. Currently only 20% of freshwater wetland extent remains in the Pimpama-Coomera catchment. Reducing further decline of freshwater wetlands and enhancing the condition is critical.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (74%) and 52% felt motivated to use and protect waterways. 59% of Pimpama-Coomera catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 38% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including local extinctions of native species, litter, and water pollution. 82% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses or in their local waterway is important for improving waterway condition and enhancing waterway stewardship.

26 Nerang Catchment

26.1 Environmental Condition (C)

The catchment has improved slightly though remains in fair condition.

Why?

- Pollutant loads increased within the catchment from very low to low. This is due to high intensity flood events in January and February that transported sediment (mud) (80 to 267 kg/ha of sediment) from highly urbanised areas.
- The health of freshwater creeks remains excellent with slight improvement in water quality and ecosystem processes. However, fish and bug community health declined slightly.



- Stream bank vegetation in the catchment slightly improved (73% compared to previous year's coverage of 68%). This change is potentially due to new methodologies impacting results. The occurrence of coastal rainfall in the catchment assisted in maintaining foliage projective cover.
- Freshwater wetlands in the catchments remained stable (3%).
- Estuarine health has improved significantly from good to excellent due to a decrease in nutrients (total nitrogen and total phosphorus) and algae (phytoplankton). Dissolved oxygen also improved.

26.2 Waterway Benefit Rating

- Despite only fair catchment condition, a very high number of residents (84%) are satisfied with their local waterways (compared with 62% for all South East Queensland).
- Residents report that they highly value their local waterways for recreation. 70% of residents recreate in or alongside their local waterway on a weekly basis. The top activities include walking or running (104 days/year), enjoying nature (44 days/year), swimming (21 days/year), cycling (17 days/year), and picnics or BBQs (12 days/year). The recreational value per person was valued at \$2,302/year.
- Despite increases in pollutant loads this year, the amount of mud removed from drinking water at the treatment plant remains very low compared with previous years (115 kg/ML in 2019 to 64 kg/ML in 2020).

26.3 Ways to improve waterway health and benefits

- Over the next 25 years, the population of the City of Gold Coast Council area is projected to nearly double (to approximately 930,000). Given this, it is becoming increasingly important to reduce the effects upon the environment from development activities that have undue impact. Improving development controls and applying water sensitive urban design practices to development is critical in the maintenance and improvement of catchment health and water quality values.
- Protecting and managing critical habitats within the catchment including existing streambank vegetation and wetlands is critical for mitigating the increasing pressures that come with population expansion. Currently 73% of streambanks in the Nerang catchment are vegetated. Protecting and enhancing the condition and managing development in the riparian zones is key to maintaining catchment condition.
- Protecting wetlands from clearing and weed infestation is key to maintaining catchment condition and recreational value in the face of projected increasing population and development. Currently only 3% of freshwater wetland extent remains in the Nerang catchment. Reducing further decline of freshwater wetlands and enhancing the condition is critical.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (80%) and 57% felt motivation to use and protect waterways. 56% of Nerang catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 39% responded that they are likely to become more involved in their local environmental community group.

- Incentivise changes to community behaviour relating to identified top environmental issues of concern including litter and loss of places of natural beauty. 79% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterway is important for improving waterway condition and enhancing waterway stewardship.

27 Tallebudgera-Currumbin Catchment

27.1 Environmental Condition (B)

The catchment has declined slightly and remains in good condition.

Why?

- Pollutant loads have increased from very low to moderate within the catchment. This is due to high intensity flood events in January and February that transported sediment (mud) and nutrients (107 to 353 kg/ha of sediment) from highly urbanised areas.
- The health of freshwater creeks remains excellent however fish community health declined. However, water quality and ecosystem processes improved.
- Stream bank vegetation in the catchment improved (91% compared to previous year's coverage of 84%). This change is potentially due to new methodologies impacting results. The overall result for the Tallebudgera-Currumbin Creeks was good. The occurrence of coastal rainfall in the catchment assisted in maintaining foliage projective cover.
- Freshwater Wetlands in the catchments slightly declined (6% compared to previous extent of 10%). This change is potentially due to improvements in mapping and methodologies. Changes in updated mapping include the freshwater wetlands in Annabel Creek and Piggabeen Crossing Place.
- Estuarine health improved from good to excellent condition due an improvement in dissolved oxygen in the upper reaches of Currumbin Creeks.

27.2 Waterway Benefit Rating ★★★★★

- Good catchment condition results in very high numbers of residents (85%) satisfied with their local waterways (compared with 62% for all of South East Queensland).
- Residents report they value their local waterways for recreation. 85% of residents recreate in or alongside their local waterway on a monthly basis, the highest in South East Queensland. Very high numbers value them as a place of rest and relaxation (75%) or for social interaction with friends and family (68%). The top activities include walking/running (139 days/year), enjoying nature (59 days/year), swimming (48 days/year), cycling (27 days/year), surfing/kite surfing/sail boarding (20 days/year), and picnics/BBQs (12 days/year). The recreational value per person was valued at \$3,810/year.

27.3 Ways to improve waterway health and benefits

- Over the next 25 years, the population of the City of Gold Coast Council area is projected to nearly double (to approximately 930,000). Given this, it is becoming increasingly important to

reduce the effects upon the environment from development activities that have undue impact. Improving development controls and applying water sensitive urban design practices to development is critical in the maintenance and improvement of catchment health and water quality values.

- Protecting and managing critical habitats within the catchment including existing streambank vegetation and wetlands is critical for mitigating the increasing pressures that come with population expansion. Currently 91% of streambanks in the Tallebudgera-Currumbin catchment are vegetated. Protecting and enhancing the condition and managing development in the riparian zones is key to maintaining catchment condition.
- Protecting wetlands from clearing and weed infestation is key to maintaining catchment condition and recreational value in the face of projected increasing population and development. Currently only 6% of freshwater wetland extent remains in the Tallebudgera-Currumbin catchment. Reducing further decline of freshwater wetlands and enhancing the condition is critical.
- Empower resident action through promoting opportunities for waterway care. A high number of residents feel a personal connection with nature (75%) and 66% felt motivated to use and protect waterways. 62% of Tallebudgera-Currumbin catchment residents reported that they would be likely to clean up sections of their local waterways in the next 12 months and 39% responded that they are likely to become more involved in their local environmental community group.
- Incentivise changes to community behaviour relating to identified top environmental issues of concern including litter, climate change, and decline in fish numbers/sustainable fisheries. 86% of residents reported that they would be willing to do something different in their day to day life if it protected their local waterways. Providing support for residents to make change around their homes, businesses, or in their local waterways is important for improving waterway condition and enhancing waterway stewardship.

28 Appendix 1: Summary of Environmental Condition Grades and Waterway Benefit Rating Scores from 2015 to 2020

Catchment/Bay Zone	Environmental Condition Grade						Waterway Benefit Rating					
	2015	2016	2017	2018	2019	2020	2015	2016	2017	2018	2019	2020
Noosa	A-	A-	A-	A-	A-	A-	4.5	4	4.5	4.5	5	4.5
Maroochy	C+	B	B-	B-	B-	C+	4	4	4	3.5	4	4.5
Mooloolah	C+	B	B-	C+	C+	C	4	4.5	4	3.5	4	4.5
Pumicestone	B-	B+	A-	B+	A-	A-	4.5	4.5	4	4	4	4.5
Caboolture	C+	B	B	B+	B+	B+	3.5	3	3	3	3.5	3.5
Pine	C	B-	B-	B-	B	B	3	3	3.5	3.5	3.5	4
Lower Brisbane	C-	C-	D+	D+	C-	D+	2.5	3	2.5	2.5	3	3
Redland	C+	C+	C+	C	C+	C+	3.5	3.5	3.5	3.5	3.5	3.5
Mid Brisbane	D	D+	B-	C-	C+	C	2.5	3	3	3	3.5	2.5
Upper Brisbane	D	D	D	D	D	D	3.5	3	3	2.5	3	2.5
Stanley	B	B	B-	B	B-	B	2.5	3	3.5	3.5	3.5	3.5
Lockyer	D+	D+	D+	D+	D	D-	2.5	2.5	2.5	2.5	3	2.5
Bremer	D-	D+	D-	D+	D+	D	2.5	2.5	2.5	2.5	2.5	3
Logan	D	C-	C-	C-	C	C+	2.5	2.5	2	2	2.5	2.5
Albert	C-	C+	C	C	B-	B-	3	3.5	3	2.5	3.5	3.5
Pimpama-Coomera	C+	B	B-	B	B-	B	3.5	3.5	3.5	3.5	4	4
Nerang	C-	C	C-	C+	C	C	4	4	4	4	4	4.5
Tallebudgera-Currumbin	C+	B	B-	B	B+	B	4	4	4.5	4	4.5	5
Western Bay	B	B	B	B+	A-	A-	Not applicable					
Central Bay	B+	B+	A-	A-	A-	A-						
Eastern Bay	A	A-	A	A-	A	A						
Southern Bay	B+	B	B	B	B+	B+						
Broadwater	A-	B+	A-	A	A	B+						
Moreton Bay	A-	A-	B+	A-	A-	A-						



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