



Healthy Waterways Report Card 2014



Brisbane City Council



Lockyer Valley Regional Council



Noosa Council



Logan City Council

HEALTHY WATERWAYS **FOR A HEALTHY ECONOMY**



South East Queensland's waterways provide significant social and economic benefits

South East Queensland is blessed with beautiful waterways that underpin our unique lifestyle and cultural identity. The waterways provide significant environmental values, support the economy and define the character of the region.

Historically, the waterways have always been a precious resource for the people of South East Queensland. Before European settlement, indigenous people used waterways for food and transport, as well as cultural and spiritual activities. Early European settlers located their towns along the waterways, and historical records comment on the excellent water quality and abundance of wildlife.

More recently, numerous Healthy Waterways' studies have confirmed that waterway health continues to be highly valued by the community. Our waterways are estimated to provide over \$5 billion per year to South East Queensland's economy¹ through industry, tourism, recreation and fishing.

Modelling studies have consistently predicted that without significant changes in our behaviour, waterway health will deteriorate. With one of the fastest growing populations in Australia, engaging new and existing South East Queensland residents in waterway health stewardship is crucial.

Healthy Waterways' members are conducting a range of activities to help the community connect to and care for their local creeks. To recognise the role of community actions in improving waterway health, Healthy Waterways is developing social indicators which will be integrated into the Report Card from 2015 onwards.

This will include monitoring community stewardship levels and the range of community benefits that our waterways provide.



Community stewardship is critical to protect waterway health

Healthy Waterways' members have identified connecting communities to their local waterways as a regional priority for inspiring individual and collective action to achieve healthier waterways and support the economy.

Whether you are an individual, water professional, community group, local business or major corporation, we all have a stewardship role to play in protecting and improving the health of our waterways.

There are a number of things you can do around your home or business such as conserving water, planting native vegetation, using eco-friendly cleaning products, picking up litter and washing your car on the grass.

Within your local community, you can join catchment stewardship groups and participate in initiatives such as tree plantings and litter cleanup activities. Across South East Queensland there are hundreds of community stewardship groups whose volunteers provide their time and effort to deliver on-ground waterway health initiatives. Through donating their time, these volunteers make a valuable contribution to society, both environmentally and economically. In 2008, the Queensland Government estimated the economic value of volunteering at more than \$13 billion. In addition, through improving local waterway health, these stewardship groups contribute to increasing opportunities for recreation and tourism which supports the local economy.

Winner of the 2014 Healthy Waterways Community Award and 2014 Minister's Grand Prize

'Connecting Community for Waterways' Save our Waterways Now and Arthur Gorrie Correctional Centre

Prison inmates at the Arthur Gorrie Correctional Centre cultivated 67,000 trees which were planted by the local community.



Waterway health supports and benefits healthy communities

Waterways play a key role in providing a range of community benefits including recreation and tourism activities, positive health and wellbeing outcomes, and increased liveability.

Waterways support our wellbeing and quality of life by providing spaces where people come together to socialise and exercise outdoors as well as experience spiritual and cultural connections with nature.

Not only are waterways an integral part of our lifestyle and cultural identity, they are also a significant economic asset which underpin our tourism and

recreation industries. Waterway related tourism boosts local business, generates jobs and attracts investment. The nature-based tourism industry is critical to South East Queensland's economy as it generates approximately \$2.9 billion per year¹. Our waterways are one of the main reasons for international and domestic visitors travelling to South East Queensland.

By connecting the community with their local waterway through stewardship and recreational activities, we can raise community awareness and inspire action to protect our precious waterways.

Winner of the 2014 Healthy Waterways Indigenous Award

'Caring for Quandamooka Country' Quandamooka Yoolaburrabee Aboriginal Corporation and Quandamooka Land Council

Caring for Quandamooka Country is a restoration project at Myora Springs on Stradbroke Island, a spiritually significant site for the Quandamooka people.



1. Marsden Jacobs Associates 2011.
2. State of Queensland, Department of Communities 2008. The economic value of volunteering in Queensland.

Ecosystem Health Monitoring Program
The Ecosystem Health Monitoring Program (EHMP) is one of the most comprehensive freshwater, estuarine and marine monitoring programs in Australia. The EHMP delivers a regional assessment of the ambient ecosystem health for each of South East Queensland's (SEQ) 19 major catchments, 18 river estuaries and nine zones in Moreton Bay.

Healthy Waterways manages the program on behalf of our member organisations, and it is delivered by a large team of experts from the Queensland Government, Queensland Urban Utilities, CSIRO, Griffith University and the University of Queensland.

Report Card Grades – What do they mean?
Since 2000, the EHMP has produced an annual Ecosystem Health Report Card which helps us understand whether the health of our waterways is improving or declining. Ecosystem health is assessed against relevant benchmarks, resulting in a single grade for each freshwater, estuarine and marine system.

A total of 135 freshwater sites are monitored biannually, and 254 estuarine and marine sites are monitored monthly across SEQ and Moreton Bay.

The 2014 Report Card grades ('A' to 'F') are based on analysis of data collected from July 2013 to June 2014.

- A Excellent:** Conditions meet all set ecosystem health values. All key processes are functional and all critical habitats are in near pristine condition.
- B Good:** Conditions meet all set ecosystem health values in most of the reporting region. Most key processes are functional and most critical habitats are intact.
- C Fair:** Conditions meet some of the set ecosystem health values in most of the reporting region. Some key processes are functional and some critical habitats are impacted.
- D Poor:** Conditions meet few set ecosystem health values in most of the reporting region. Many key processes are not functional and many critical habitats are impacted.
- F Fail:** Conditions do not meet set ecosystem health values. Most key processes are not functional and most critical habitats are severely impacted.

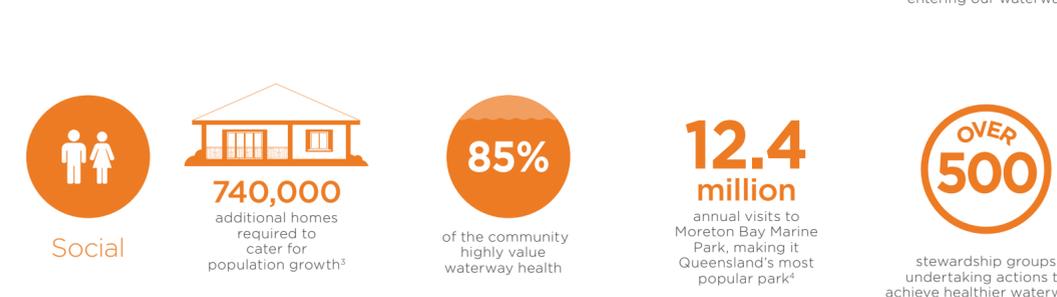
Indicators used for assessing ecosystem health

- Freshwater**
Five ecological indicator groups measured:
- physical chemical
 - nutrient cycling
 - ecosystem processes
 - aquatic macroinvertebrates
 - fish

- Estuarine and Marine**
Ecological Health Index indicators measured:
- algae (phytoplankton)
 - *Lyngbya*
 - secchi depth (water clarity)
 - total phosphorus
 - total nitrogen
 - sewage nitrogen signal
 - turbidity
 - dissolved oxygen
- Biological Health Rating indicators measured:
- seagrass
 - coral
 - nutrient processing
 - sewage nitrogen signal
 - riparian condition

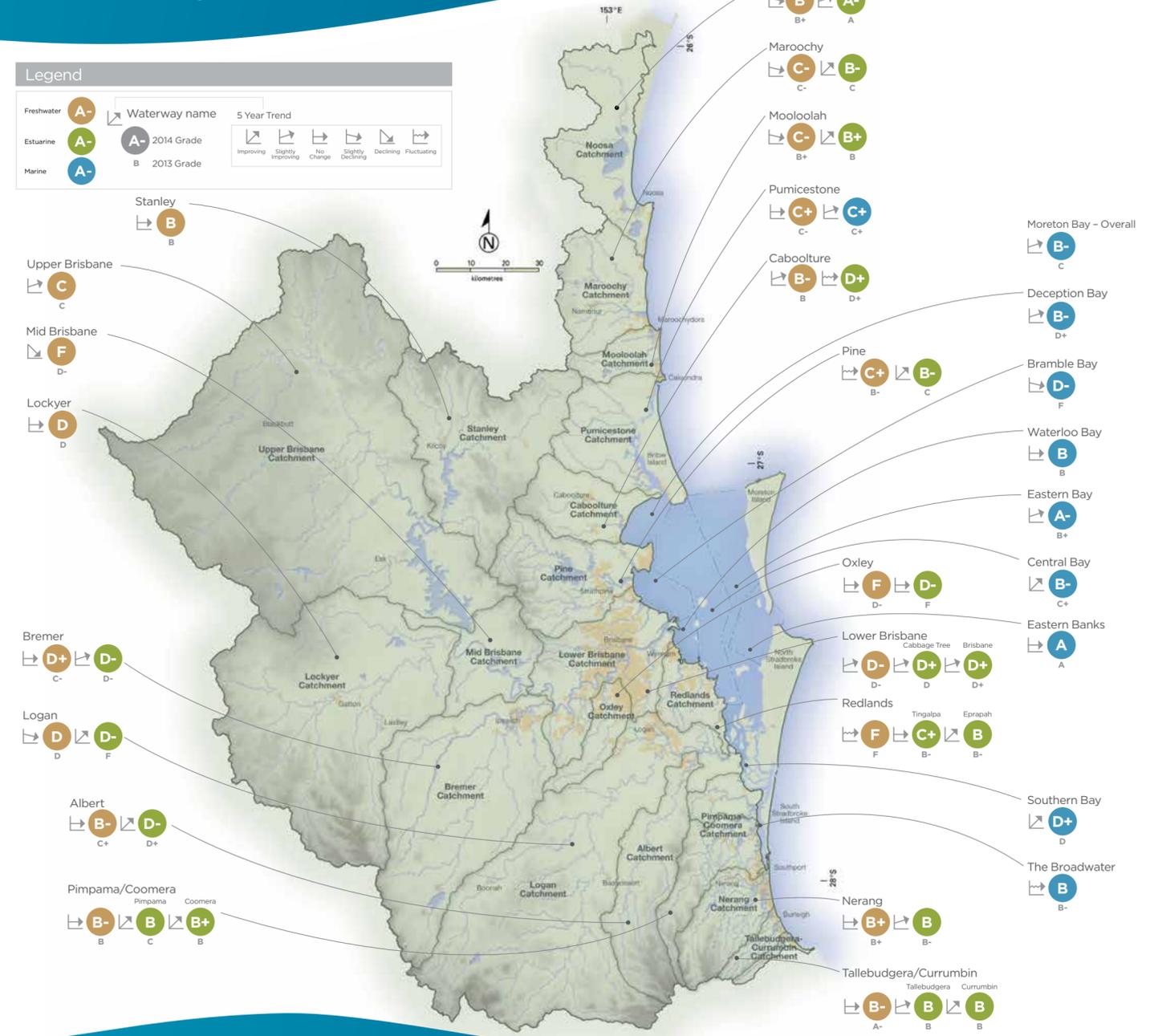
For more information, please refer to the 2014 Report Card Methods on our website www.healthywaterways.org

South East Queensland's waterways - stacking up the numbers



1. Queensland Government population projections to 2031
2. Marsden Jacobs Associates 2011
3. South East Queensland Regional Plan 2009-2031
4. Queensland Parks and Wildlife Service Community Survey 2012
5. Chilvers et al., 2005
6. Bunn et al., 2008; Roelfsema et al., 2013
7. Wilson et al., 2011
8. enQUIRE Database

Freshwater, Estuarine and Marine Report Card 2014



Key messages of the 2014 Report Card

The 2014 Report Card reveals the health of South East Queensland's waterways and Moreton Bay.

Overall, there was a decline in freshwater grades and improvements in estuarine and marine grades across South East Queensland.

In this reporting period, many of the catchments received the lowest rainfall since the monitoring program began. Low rainfall and a lack of riverbank vegetation negatively impacted native fish and macroinvertebrates and contributed to declines in freshwater grades.

The improvements in estuarine and marine grades reflect the significant investment that has occurred over the past 14 years. Point source pollution has been reduced through wastewater treatment plant upgrades, even with a growing population.

The major issue affecting waterway health in South East Queensland continues to be the increasing amount of mud entering our waterways. In order to protect and improve waterway health, we need to manage runoff from expanding urban areas, plant native vegetation along degraded waterways and protect existing riverbank vegetation.

Freshwater - Declined

Across the region there was an overall decline in freshwater grades. In most streams, fish and aquatic macroinvertebrate indicators declined due to a lack of riverbank vegetation and decreased rainfall, reducing the amount of water and habitat in our streams. The nutrient cycling indicator declined in most of the northern catchments. Throughout the region, eight catchments maintained the same grade, nine catchments declined and two catchments, Albert (C+ to B-) and Pumicestone (C- to C+), improved in grade. The catchments that traditionally receive some

of the highest grades in the region, Mooloolah (B+ to C-) and Tallebudgera/Currumbin (A- to B-), recorded the largest declines in grade due to less water flow leading to decreases in the nutrient cycling and aquatic macroinvertebrate indicators. Mid Brisbane (D- to F) and Oxley (D- to F) both returned to an F grade.

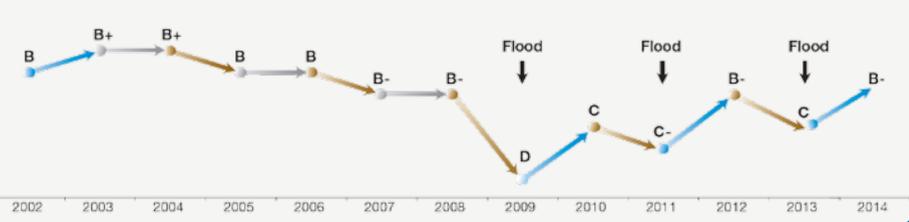
Estuaries - Improved

Across the region there was an overall improvement in estuarine grades. Twelve estuaries improved in grade, with eight of these estuaries receiving the highest or equal highest grade since monitoring began. Three of the most significant improvements occurred in Maroochy (C to B-), Pimpama (C to B) and Erapah (B- to B), which received the highest grades ever recorded for these estuaries. Improvements in most estuaries across the region were due to decreased nutrients and turbidity and increased dissolved oxygen. Noosa (A to A-), Tingalpa (B- to C+) and Albert (D+ to D-) were the only estuaries to decline in grade due to increased algae and decreased dissolved oxygen.

Marine - Improved

There was an overall improvement in Moreton Bay (C to B-). All of the marine grades have remained the same or improved due to increased water clarity and reduced algae and nutrients. Deception Bay (D+ to B-) showed the largest improvement, receiving the highest grade ever recorded. Improved water quality over the past five years has contributed to a significant recovery of seagrass meadows in southern Deception Bay.

Trends in the ecosystem health of Moreton Bay



Expanded 2015 Report Card

The complete picture of our waterways

Healthy Waterways is expanding the Report Card to include social and economic indicators to complement the environmental indicators currently monitored. Healthy Waterways' independence and unique position will enable us to deliver the next evolution of Report Card, providing a holistic understanding of our waterways and informing future investment in waterway initiatives.

From 2015 onwards, the Report Card will begin to report on the many social and economic benefits that our waterways provide. Healthy Waterways has already commenced an expanded monitoring program to capture data on community stewardship levels and the economic value of our waterways.

In addition, the environmental indicators have been reviewed to ensure the monitoring program remains scientifically robust, relevant and cost effective. Healthy Waterways intends to introduce improvements to the environmental monitoring program through the implementation of new technology such as the use of predictive modelling to assess the effectiveness of waterway initiatives. Successful implementation requires new capital investment.

By highlighting the achievements in protecting and improving South East Queensland's waterways, the expanded 2015 Report Card will acknowledge the ongoing efforts of community, government and industry.



Winner of the 2014 Healthy Waterways Government Award

'The Slacks Creek Catchment Recovery Project'
Logan City Council

The Slacks Creek Catchment Recovery Project aims to inspire community stewardship and achieve long-term social, environmental and economic benefits. Over the past few years, more than 2,300 volunteer hours have been spent planting trees, removing weeds and picking up litter.

Healthy Waterways is an independent, not-for-profit organisation working to protect and improve South East Queensland's waterways. Together with our members from government, industry, and the community we have one clear vision to achieve healthy waterways for a healthy economy. Healthy Waterways works to understand and communicate the condition of our waterways to drive and influence future targets, policy and actions. We pride ourselves in providing best practice scientific advice that informs effective and efficient waterway management.

For more information, please visit www.healthywaterways.org



Dedicated to a better Brisbane



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Front cover images: (Top to bottom) Brisbane City Council: Glindemann Park Creek Filtration System. Lockyer Valley Regional Council: Colquhoun's wetland in Lower Tenthill is a haven for wildlife and water birds. Noosa Council: sand island weeding by Noosa Integrated Catchment Association volunteers. Logan City Council: Slacks Creek Catchment Recovery creates places for people and nature.

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