

Queensland REEF WATER QUALITY Program



Managing urban impacts on Reef water quality Urban run-off and wastewater management

The Great Barrier Reef is facing many pressures including the impacts of climate change and poor water quality.

Urban areas cover less than 1% of the Reef catchment. Yet stormwater run-off from urban and industrial land use and wastewater treatment plant releases contribute up to 7% of the dissolved inorganic nitrogen entering the Reef and close to 2% of the sediment that flows to the Reef.

These activities can also impact the health of local waterways and the community benefits they provide.

Who manages urban run-off and wastewater?

Urban run-off is a shared responsibility between governments, the development and construction industry and water service providers. Support is also provided by peak bodies such as the Local Government Association of Queensland (LGAQ) and natural resource management organisations.

In the Great Barrier Reef catchment, local government is responsible for managing wastewater treatment and stormwater in line with Queensland Government legislation.

The challenges for Reef councils

Managing urban run-off requires effective policy, planning and governance as well as appropriate training, capacity and resourcing.

The financial investment to upgrade treatment plants and the technical capacity to operate them is not always readily available to smaller councils in the Reef catchment.

These common challenges can make it difficult for these councils to go beyond the legislative requirements for managing urban water.

How is urban run-off to the Reef managed?

The Queensland Government is taking an integrated approach to addressing land-based sources of water pollution to the Reef. This includes managing run-off from agriculture, which by land area has a far greater impact, as well as urban run-off.

More than \$270 million is being invested into improving Reef water quality with around \$3.5 million of this dedicated to addressing the urban sector's role in water quality.

Delivered in partnership with local councils and industry, these 'urban stewardship' initiatives focus on improved urban land use management and wastewater treatment while supporting regional communities and economies.

Legislation and new discharge standards

Queensland's State Planning Policy has been updated to provide clearer guidance on how the state's water quality interests are to be protected.

In addition to this, the Reef protection regulations require all new, expanded or intensified point source activities (for example, wastewater treatment) to meet new discharge standards to ensure there is no increase in nutrients flowing to the Reef.

If this can't be achieved through design or operating conditions, a Point Source Offsets Policy allows for nutrient offset schemes providing greater flexibility for councils to achieve no net decline in water quality.

Allowances have also been made for developers to use off-site urban stormwater management solutions where options for installing suitable stormwater treatment devices within the development footprint are limited.



Better monitoring

The Queensland Government's Water Tracking and Electronic Reporting System (WaTERS) captures and assesses data from wastewater treatment plant releases across the state. With more treatment plants now providing data to WaTERS, there is a much better understanding of the levels of nutrients and other contaminants being released within the Reef catchment.

Information is also being captured through the Point Source Metadata Project around the number, location and nature of point source activities and facilities including their licence conditions and nutrient emissions across the Reef catchment.

This information is being used to review licence conditions and to ensure minimum standards are set for nutrient emissions based on treatment plant size and type. It will also be extended to other point source types, including aquaculture.



Skills and capacity building

Increasing the capacity and skills of local councils and the construction industry in wastewater treatment, stormwater management and erosion management, including compliance, is critical in reducing urban run-off.

The Queensland Government funds the Erosion and Sediment Control and Urban Stormwater Capacity Building program delivered by Healthy Land and Water – Water by Design and the Queensland Water Regional Alliance Program (QWRAP), an industry-led regional collaboration between 30 councils, LGAQ and qldwater.

Healthy Land and Water provides direct on-site training and resources including a toolkit and mobile app for local government sediment and erosion compliance inspections and coordinates the Reef Urban Stormwater Management Group forums.

The QWRAP provides a formal opportunity for councils to partner on managing water and sewerage services in regional Queensland.

Bench-marking framework

The Urban Water Stewardship Framework is supporting councils and the development and construction industry in the Reef catchment to evaluate their urban water management practices and activities.

Funded through the Queensland Reef Water Quality Program, the framework provides an evidence basis for councils to identify and prioritise areas they need to improve. It is also generating greater dialogue between councils and urban water managers for better water quality outcomes.

Trialling low-cost wastewater treatment solutions

The Queensland Government has invested \$1.15 million in the Cleaner Wastewater Initiative, which is linked to the Reef Councils Reef Rescue Plan.

The initiative is providing Reef councils with information to make decisions around moving towards alternative, low-cost wastewater management solutions. This includes establishing three demonstration trial projects.

Two of the projects provide examples of different point source offset approaches, which is important as there are few examples outside of south east Queensland.

The third project is a timber plantation reusing treated wastewater, which opens up the possibility of investment return through carbon abatement schemes.

Learnings from these trial projects will help guide other Reef councils should they wish to pursue similar options.

Further resources

Healthy Land and Waters – Water by Design
hlw.org.au/project/water-by-design

Queensland Water Regional Alliance Program
qldwater.com.au/QWRAP

To find out more or become involved:
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