

A photograph showing two individuals in waders and life jackets conducting freshwater sampling in a river. One person is standing on the bank holding a clipboard and a red bucket, while the other is in the water using a long pole to collect a sample. The background is lush green vegetation.

Providing water for growing communities

An alliance in South East Queensland has received national recognition for its management of waterways.

Freshwater sampling being conducted by the Ecosystem Health Monitoring team. PHOTO: SEQ HEALTHY WATERWAYS PARTNERSHIP

The South East Queensland Healthy Waterways Partnership has won the 2009 Banksia Environmental Award for Water for its work in protecting and improving the waterways of South East Queensland (SEQ).

Presented by the Banksia Environmental Foundation, the Banksia Awards recognise initiatives which set a national example in the pursuit of environmental sustainability.

In accepting the award in Melbourne on behalf of the partnership, project director Di Tarte described some of the milestones achieved in waterway health over the past two years.

“The partnership has advised on ongoing significant investment in wastewater treatment plant upgrades to reduce nitrogen and phosphorus discharged into creeks, rivers and waterways, as well as the uptake of water sensitive urban design to reduce the impacts of urban subdivisions.”

The South East Queensland Healthy Waterways Partnership was established in 2001 as collaboration of over 113 organisations. One of the most significant ongoing projects managed by the Partnership is the Ecosystem Health Report Card, which provides an annual snapshot of waterway health.

“The vision of the Partnership is that by 2026, the waterways and catchments of South East Queensland will be healthy ecosystems supporting the livelihoods of the people in the region managed through collaboration between community, government and industry,” Tarte said.

Diverse ecosystem in a growing region

South East Queensland (SEQ) occupies 22,672 km² and includes 14 major river catchments and Moreton Bay. By 2030, SEQ’s population is predicted to grow from 2.73 million people to over four million. This rapid growth will result in increasing

demands for reliable supplies of potable water, an estimated 50% increase in point source pollution and a 20% increase in diffuse source pollution, plus increased recreational pressures on natural areas including our waterways.

The significance of the biodiversity of Moreton Bay is recognised through its listing as an international Ramsar wetlands site and the creation of the Moreton Bay Marine Park.

Maintaining the ecosystem health of Moreton Bay is the driver for the South East Queensland Healthy Waterways Partnership. Its objective is to halt water quality decline and improve the ecosystem health of Moreton Bay and the region’s estuarine and freshwater assets. In aiming to understand, plan and manage the use of the waterways and catchments of SEQ, the Partnership developed the SEQ Healthy Waterways Strategy 2007-2012.

Achievements

The Partnership has made significant achievements including:

- ongoing investment in wastewater treatment plant upgrades to reduce nitrogen and phosphorus loads discharged
- implementing water sensitive urban design activities addressing stormwater management, erosion and sediment control and integrated water cycle management
- retrieving over 233,000 items of litter from the Brisbane and Bremer Rivers, Gold Coast and Logan waterways in the period from July 2007 to June 2008 through the Healthy Waterways Clean Up Program.

There was also the expansion of the Partnerships’ Water by Design capacity building program to support the uptake of water sensitive urban design (WSUD) in SEQ.

This program developed knowledge and skills by delivering ten training modules. Between 2007 and 2009, 33 training sessions



Staff at the launch of the waterways strategy.

PHOTO: SEQ HEALTHY WATERWAYS PARTNERSHIP

were held with over 800 people attending.

The program also saw the completion of the Conceptual Design Guideline for WSUD, a Stormwater Harvesting Guideline and the Construction and Establishment Guidelines which aim to build awareness of the techniques to sustainably manage urban water.

It facilitated the capacity of local government development assessment teams to implement best practice WSUD through hosting forums to discuss common issues and best practice approaches. Lastly, the program led delivery of design objectives for urban stormwater management which were incorporated in the Draft SEQ Regional Plan Implementation Guidelines No 7: WSUD – Design Objectives for Urban Stormwater Management. These design objectives ensure best practice stormwater management.

Monitoring the waterways

The Partnership's Ecosystem Health Monitoring Program (EHMP) coordinates the region-wide ambient aquatic monitoring program.

Between 2007 and 2009, the EHMP:

- Monitored 19 catchments and 18 estuaries in SEQ and nine zones within Moreton Bay. This included 254 estuarine and marine sites on a monthly basis and 135 freshwater sites in spring and autumn.
- Identified and reported on demonstrable improvements in waterway health linked to management actions including the achievement of a C grade for Bramble Bay (originally rated an F in 2000) and highlighted declines for estuaries including the Caboolture River (F grade in 2008).

To complement the EHMP, the Partnership established a region-wide Event Monitoring Program in 2007-2008, to monitor pollutant loads entering waterways during rainfall events at 75 locations.

Following major rainfall events in January 2008, an extensive contingency monitoring program in the Logan River estuary and Southern Moreton Bay was coordinated by the Partnership.

The Partnership utilises Decision Support Tools to assist Partners in evaluating and prioritising management actions. These tools include the Environmental Management Support System which estimates daily runoff and daily pollutant loads from 175 catchments in the region, and the Receiving Water Quality Model which simulates the hydrodynamics, transport and water quality in SEQ estuaries and Moreton Bay. Partners have utilised these tools to assist in planning for development and infrastructure upgrades.

The Partnership's Decision Support Tools allow for evaluation of management investment options as well as providing the capacity to model future scenarios for waterway health outcomes and provide an overarching evaluation, modelling, research and learning framework.

Providing scientific advice

One of the goals of the Partnership's Science and Innovation Program is to provide independent scientific advice to partners. This advice has driven significant improvements in modelling and research methods, establishing benchmarks for management interventions and associated technology.

For example, the scientific research identified Moreton Bay as a nitrogen-limited ecosystem. It then determined the relevant water quality objectives for nitrogen and phosphorus in the receiving



(Above): Participants in the Water By Design training course which develops knowledge and skills in water sensitive urban design.

(Right): Shown holding the Ecosystem Health Report Card, which provides an annual snapshot of waterway health, are (l-r) vice-chancellor and president of the University of Queensland Professor Paul Greenfield; former Queensland minister for sustainability, climate change and innovation Andrew McNamara; and lord mayor of Brisbane Campbell Newman.

PHOTO: SEQ HEALTHY WATERWAYS PARTNERSHIP

waters, which provided the basis for standards for wastewater treatment plants.

These benchmarks have driven technological innovation in the SEQ wastewater treatment industry. The Partnership's monitoring work and scientific advice has been published in international literature.

International influence

The Partnership model has been studied by scientists and policymakers from other regions of Australia and overseas, including the Philippines, China, Singapore, Indonesia and Pacific nations.

Representatives of the World Bank, the Asian Development Bank and the European Union have also visited the Partnership. The work of the Partnership has attracted recognition in the form of invited keynote presentations at national and international conferences. ●

This article is based on the South East Queensland Healthy Waterways Partnership's awards submission to the 2009 Banksia Awards.

