POLICY NAME: DRAFT Urban Water Quality

POLICY REF:

MEETING ADOPTED:
Resolution No.

POLICY HISTORY:

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OBJECTIVE

Provide effective Water Quality Management Systems to ensure waters produced (Drinking Water and Recycled Water) or impacted upon by Council's Wastewater Operations meets legislative and Nation Water Quality Management Strategy requirements.

BACKGROUND

Need for a Policy

Organisational support and long-term commitment by senior management is the foundation to implementation of an effective system for urban water quality management. Successful implementation requires:

- an awareness and understanding of the importance of urban water quality management and how decisions affect the protection of public and environmental health;
- the development of an organisational philosophy that fosters commitment to continual improvement and cultivates employee responsibility and motivation;
- the ongoing and active involvement of senior management to maintain and reinforce the importance of urban water quality management to all employees as well as those outside the organisation.

Development of an urban water quality policy is an important step in formalising the level of service to which Ballina Shire Council is committed. It will increase the focus on water quality management throughout the organisation. The policy provides the basis on which all subsequent actions can be judged. It defines the organisation's commitments and priorities relating to urban water quality.

The policy forms the basis for development of more detailed policies and implementation strategies to support the effective management of urban water quality (e.g. appropriate staffing, training of employees, provision of adequate financial resources, active participation and reporting protocols).

Relevance of Related Documentation

National Water Quality Management Strategy

The National Water Quality Management Strategy (NWQMS) is a joint national approach to improving water quality in Australian and New Zealand waterways. It was originally endorsed by two Ministerial Councils - the former Agriculture and Resources Management Council of Australia and New Zealand (ARMCANZ) and the former Australian and New Zealand Environment and Conservation Council (ANZECC).

Since 1992 the NWQMS has been developed by the Australian and New Zealand Governments in cooperation with state and territory governments. Ongoing development is currently overseen by the Standing Council on Environment and Water (SCEW) and the National Health and Medical Research Council (NHMRC).

The NWQMS aims to protect the nation's water resources, by improving water quality while supporting the businesses, industry, environment and communities that depend on water for their continued development.

The NWQMS consists of three major elements:

1. Policy
2. Process
3. Guidelines

The key elements for urban water quality managements are the guidelines documents provided as part of the NWQMS. Particularly;

- Australian Drinking Water Guidelines
- Australian Guidelines for Water Recycling
- Guidelines for Sewerage Systems
- Australian guidelines for water quality monitoring and reporting

The Guidelines provide a solid foundation for assessing water quality by specifying health-based, environmental and aesthetic criteria.

Drinking Water and Recycled Water

For systems that supply water (Drinking Water and Recycled Water) this is embodied in the Guidelines as the philosophy of a multiple barrier approach from catchment to tap to ensure the safety of the water and through the "Framework for Management of Water Quality".

The Guidelines are directed by seven fundamental principles vital to ensuring safe drinking water quality:

- The greatest risks to consumers of water are pathogenic microorganisms. Protection of water sources and treatment are of paramount importance and must never be compromised.
- The water system must have, and continuously maintain, robust multiple barriers appropriate to the level of potential contamination facing the water supply.
- Any sudden or extreme change in water quality, flow or environmental conditions (e.g. extreme rainfall or flooding) should arouse suspicion that water might become contaminated.
- System operators must be able to respond quickly and effectively to adverse monitoring signals.
- System operators must maintain a personal sense of responsibility and dedication to providing consumers with safe water, and should never ignore a customer complaint about water quality.
- Ensuring water safety and quality requires the application of a considered risk management approach.

The Framework for Management of Water Quality is a preventive approach to assuring water quality. The Framework addresses four general areas describing good management of a water supply system:

- *Commitment to water quality management*.

- *System analysis and management*: Understanding the entire water supply system, the hazards and events that can compromise water quality, and the preventive measures and operational control necessary for assuring safe and reliable drinking water.
- *Supporting requirements*: Activities and attitudes that support management of the supply system such as employee training, community involvement, and validation of the effectiveness of processes.

- *Review*: The evaluation and audit of the effectiveness of the management system, and the adoption of improvements based on the evaluation.

The Guidelines give greater detail on how the Framework can be incorporated into the activities of a water utility.. Figure 1 is a diagram of the Framework, showing the interactions of its different elements for Drinking Water. The Framework is identical for Recycled Water.

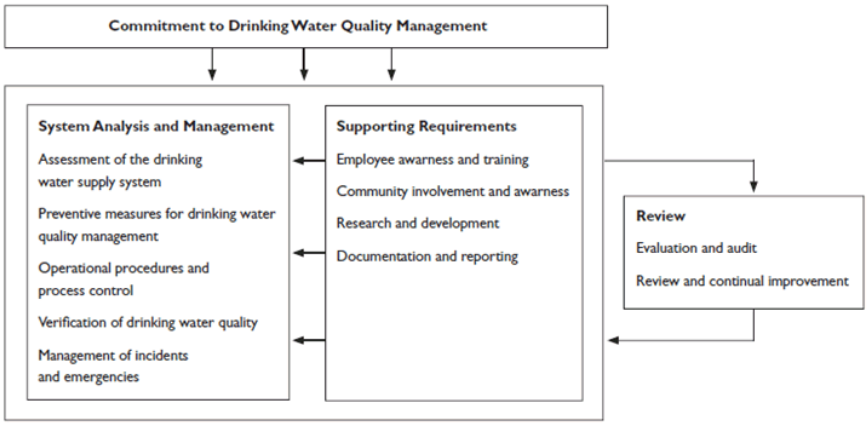

Figure 1 - Framework for Management of Drinking Water Quality

Wastewater (Sewage)

The National Water Quality Management Strategy Guidelines for Sewerage Systems do not replicate the same framework. Despite this, Council sees there are benefits in managing its wastewater operations using the same framework, in particular:

- It is compatible for the Guidelines for Sewerage Systems
- It provides a robust way of managing wastewater operations
- It offers consistency across Council, and as such more synergies can be realised
- Wastewater Treatment Plants are also Recycled Water Treatment Plants and much of the risk mitigation measures are the same
- The staff, management and reporting structure for Drinking Water, Recycled Water and Wastewater are the same

Part 5 Public Health Act 2010

The Public Health Act 2010 provides the NSW regulatory mechanism for compliance with the ADWG. This has recently been embodied in Part 5 of the (Draft) Public Health Regulation:

> *Part 5 Safety measures for drinking water*
>
> *27 Quality assurance programs*
>
> *(1) For the purposes of section 25 (1) of the Act, a quality assurance program must address the elements of the Framework for Management of Drinking Water Quality (as set out in the Australian Drinking Water Guidelines published by the National Health and Medical Research Council) that are relevant to the operations of the supplier of drinking water concerned.*
>
> *(2) A supplier of drinking water must provide a copy of its quality assurance program to the Director-General.*
>
> *(3) The Director-General may arrange for the review of a quality assurance program of a supplier of drinking water at any time.*
>
> *(4) The Director-General may make quality assurance programs and any reviews of such programs publicly available.*

Section 60 Local Government Act 1993

The Local Government Act provides the authority of the Minister for Primary Industrials to approve a recycled water scheme and apply conditions (such as the condition to manage the risks to recycled water quality using the risk based framework in the Australian Guidelines for Water Recycling).

> *Council works for which the approval of the Minister for Primary Industries is required*
>
> *A council must not, except in accordance with the approval of the Minister for Primary Industries, do any of the following…*
>
> *(c) as to sewage—provide for sewage from its area to be discharged, treated or supplied to any person…*

NSW DPI Water Publication: Recycled Water Management Systems

> *[DPI Water] encourages and adopts the [Australian Guidelines for Water Recycling] framework for approving local water utility recycled water schemes under section 60 of the Local Government Act 1993 or s292 of the Water Management Act 2000. Demonstrating compliance with the AGWR is ideally achieved with having a documented risk-based recycled water management system (RWMS) in place*

Section 48 Protection of the Environment Operations (POEO) Act 1997

The POEO Act provides Council with the Environmental Protection Licences necessary to legally operate its wastewater treatment plants. It also contains penalties for non-compliance and requirements to operate infrastructure in a 'competent manner'.

> *Licensing requirement—scheduled activities (premises-based)*
>
> *(1) Application of section*
> *This section applies to scheduled activities where Schedule 1 indicates that a licence is required for premises at which the activity is carried on. [ie Sewerage Treatment]*
>
> *(2) Offence*
> *A person who is the occupier of any premises at which any such scheduled activity is carried on is guilty of an offence, unless the person is, at the time that activity is carried on, the holder of a licence that authorises that activity to be carried on at those premises.*

DEFINITIONS

Drinking Water	Drinking Water is used for drinking and direct contract purposes (cooking, showering etc). It sourced from surface waters, ground waters, rain water or ocean waters.
ADWG	The Australian Drinking Water Guidelines – a document that set out the water quality requirement and risk management practices to operate a drinking water supply
DWMS	A Drinking Water Management System; a document that describes how Council's management practices comply with the ADWG
Recycled Water	Water used for non-drinking and non-direct contract purposes (toilet flushing, laundry, irrigation etc). Sourced from wastewater.
AGWR	The Australian Guidelines for Water Recycling – a document that set out the water quality requirement and risk management practices to operation a recycled water supply
RWMS	A Recycled Water Management System; a document that describes how Council's management practices comply with the AGWR
Wastewater	Water collected from Council's wastewater network from residential or commercial (tradewaste) premises and treated prior to discharge to the environment or reuse
EPL	An Environmental Protection Licence authorises Council to discharge treated wastewater to the environment at set locations with certain water quality requirements

PIRMP	A Pollution Response Incident Management Plan which stipulate how council responds to Wastewater incidents to comply with the requirements of the POEO Act for its licenced facilities
WWMS	A Wastewater Water Management System; a document that describes how Council's management practices comply with its EPLs and the POEO Act

SCOPE OF POLICY

This policy applies to:

- Council employees
- Councillors
- Community members
- Council owned-businesses
- Committees of Council
- Consultants/Contractors

RELATED DOCUMENTATION

Related documents, policies and legislation:

- Public Health Act 2010 (NSW)
- Local Government Act 1993 (NSW)
- Protection of the Environment Operations Act 1997 (NSW)
- National Water Quality Management Strategy Guideline Documents
    - Australian Drinking Water guidelines
    - Guidelines for sewerage systems – effluent management
    - Guidelines for sewerage system – sludge (biosolids) management
    - Guidelines for sewerage system – use of reclaimed water
    - Guidelines for sewerage systems – sewerage system overflows
    - Guidelines for sewerage systems – acceptance of trade waste (industrial waste)
    - Australian Guidelines for water Recycling (Phase 1)
    - Australian guidelines for water quality monitoring and reporting
- Ballina Shire Urban Water Management Strategy.
- Community Strategic Plan 2010-2025.
- Strategic Business Plan for Water Supply & Wastewater Services (2010)
- Developer Servicing Plans for Water Supply and Wastewater Services 2015
- Agreement with Rous Bulk Supply July 2014:

POLICY

Ballina Shire Council is committed to managing its Drinking and Recycled Water Supplies and Wastewater Services effectively to provide a safe, high-quality urban water that consistently meets the requirements of the *Australian Drinking Water Guidelines*, the *Australian Guidelines for Water Recycling* and the water quality requirements of Council's *Environmental Protection Licenses*, consumer needs and expectations, and other regulatory requirements. To achieve this, in partnerships with stakeholders and relevant agencies, Ballina Shire Council will:

- manage water quality at all points along the delivery chain from source water (through supply agreements where the source water is managed by Rous Water and tradewaste agreements where the source water is a trade waste) to the consumer;
- use a risk-based approach in which potential threats to urban water quality are identified and balanced;
- integrate the needs and expectations of our consumers, stakeholders, regulators and employees into our planning;
- establish regular monitoring of the quality of urban water and effective reporting mechanisms to provide relevant and timely information, and promote confidence in the water supply and its management;
- develop appropriate contingency planning and incident response capability;
- participate in appropriate research and development activities to ensure continued understanding of urban water quality issues and performance;
- contribute to the debate on setting industry regulations and guidelines, and other standards relevant to public health and the water cycle;
- continually improve our practices by assessing performance against corporate commitments and stakeholder expectations.

Ballina Shire Council will implement and maintain water quality management systems consistent with the *National Water Quality Management Strategy Guidelines (Australian Drinking Water Guidelines, Australian Guidelines for Water Recycling, Guidelines for Sewerage Systems, Australian guidelines for water quality monitoring and reporting)* to effectively manage the risks to urban water quality.

All managers and employees involved in the supply of urban water are responsible for understanding, implementing, maintaining and continuously improving the urban water quality management system.

REVIEW

The Urban Water Quality Policy is to be reviewed every four years.

Australian Government
Department of the Environment, Water, Heritage and the Arts

FACT SHEET (8)

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THE BETTER WATER WORKSHOP SERIES

OVERVIEW OF THE NATIONAL WATER QUALITY MANAGEMENT STRATEGY

The further implementation of the National Water Quality Management Strategy (NWQMS) can assist catchment managers, communities and government agencies to better achieve some of their important sustainability objectives and long term goals.

THE NEED FOR THE STRATEGY

The reduction in environmental health of some Australia's iconic waterbodies, such as the Murray-Darling River system, bears testimony to the need to protect and enhance the quality of water in our rivers, estuaries, lakes and other waterbodies.

In recognition of the need to better manage the quality of our water resources, the Australian Government, in cooperation with state and territorial governments, have jointly developed the National Water Quality Management Strategy, since1992.

The Strategy provides policies, a process and a series of national guidelines for water quality management.

ITS PRIMARY OBJECTIVE

The Strategy's main objective is to *"achieve sustainable use of the nation's water resources by protecting and enhancing their quality while maintaining economic and social development."*

ITS PRINCIPLES

A number of principles underpin the Strategy, namely:

- Ecologically sustainable development
- An integrated approach to water quality management
- Community involvement in setting water quality objectives and developing management plans
- Government endorsement of the water quality objectives

THE PROCESS AND PLANS

The NWQMS promotes a systematic approach which:

- Allows progressive development and implementation of plans and programs
- Provides opportunities for communities to work together to manage local water resources.
- Uses the concept of environmental values to set local water quality targets

The process involves the community working collaboratively with government to develop a management plan for each catchment, aquifer, estuary, coastal water or other waterbody.

The NWQMS plan should:

- Take account of all existing and proposed activities and developments
- Identify targets established by government, either directly or in partnership with the community
- Contain feasible management options that aim to progressively achieve the targets and ultimately sustain the environmental values that have been agreed for that waterbody

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The NWQMS has three major elements: policies, process and national guidelines.

POLICIES

The main policy objective of the NWQMS is set out in NWQMS Document No. 2, Policies and Principles — A Reference Document (ANZECC/ARMCANZ 1994) and is; to achieve sustainable use of the nation's water resources by protecting and enhancing their quality while maintaining economic and social development. This objective is being pursued through a strategy based on high-status national guidelines with local implementation. Document No. 2, emphasises the importance of:

- Ecologically sustainable development;
- Integrated (or total) catchment management;
- Best management practices, including the use of acceptable modern technology and waste minimisation and utilisation; and
- The role of economic measures, including 'user-pays' and 'polluter-pays' approaches.

PROCESS

The process for water quality management starts with the community working in concert with government to develop a management plan for each catchment, aquifer, estuary, coastal water or other waterbody. The plan should take account of all existing and proposed activities and developments; it should contain feasible management options that aim to achieve the environmental values that have been agreed for that waterbody. The process is outlined in NWQMS Document No. 3, Implementation Guidelines (ANZECC/ARMCANZ 1998) and schematically represented in Figure 1. The NWQMS envisages use of both regulatory and market-based approaches.

Environmental values and water quality guidelines are described in the benchmark NWQMS document the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ 2000) (NWQMS Document No. 4).

Management of water resources is mainly a State and Territory responsibility, but implementation of the NWQMS will be done in the context of:

- The NWQMS guidelines;
- State and Territory water policies;
- Community preferences on the use and values of local waters;
- The current water quality of local waters; and
- The economic and social impacts of maintaining current water quality or of meeting new local water quality goals.

Implementation of the NWQMS should include:

- Catchment, groundwater and coastal water quality management plans;
- An appropriate level of water and sewerage services provided by water authorities; and
- Further development of regulatory and market frameworks.

Community views form a crucial part of the NWQMS and public comment is sought during both the development and the implementation of the strategy.

NATIONAL GUIDELINES

The Australian Government has issued national guidelines to assist with the preparation and implementation of water quality management plans. The guidelines cover:

- Policies and processes to achieve water quality
- Effluent and sewerage system management
- Urban stormwater and recycled water
- Fresh and marine water quality
- Monitoring and reporting
- Groundwater protection
- Drinking water

The national guidelines are technical documents providing guidance on many aspects of the water cycle including ambient and drinking water quality, monitoring, groundwater, rural land and water, urban stormwater, sewerage systems and effluent management for specific industries. A management framework for applying the guidelines can be found at Box 1. The full list of NWQMS documents, with their current status is in Box 2. The list, together with other information, is also on the NWQMS website at,

http://www.environment.gov.au/water/publications/quality/index.html#nwqmsguidelines

IMPLEMENTATION GUIDELINES

The National Water Quality Management Strategy (NWQMS) Implementation Guidelines have been issued to assist in the development and implementation of plans to better manage Australia's water resources, including fresh and coastal waters and groundwater.

The Implementation Guidelines are just one of the 21 National Water Quality Management Strategy guidelines for managing key elements of the water cycle developed under the umbrella of NWQMS. These guidelines are listed in Box 2.

They cover:

- Policies and processes to achieve water quality
- Effluent and sewerage system management
- Urban stormwater and recycled water
- Fresh and marine water quality
- Monitoring and reporting
- Groundwater protection
- Drinking water

WHO ARE THE IMPLEMENTATION GUIDELINES FOR?

Guidelines are for:

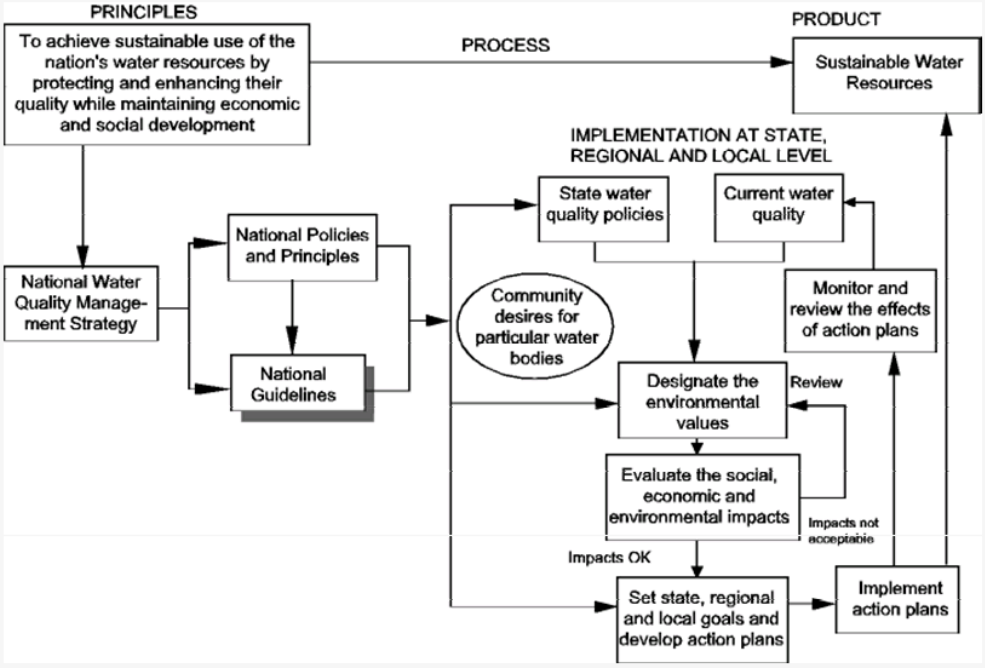
- Any community in Australia wishing to become involved in the process of developing water quality goals for local waters
- Water authorities and their customers wishing to review the authority's level of service
- Managers in government and industry
- Landholders
- Environmental groups
- Special interest groups

WHAT DO THE IMPLEMENTATION GUIDELINES CONTAIN?

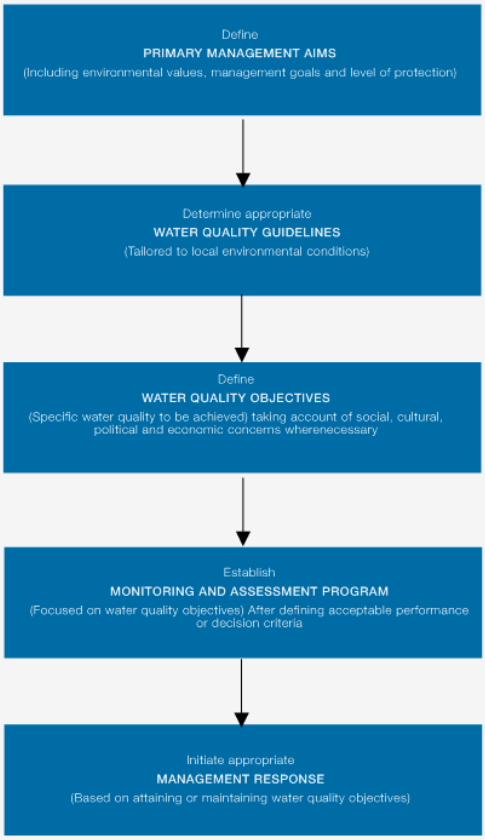
The Implementation Guidelines contain advice on:

- The use of the other 20 guidelines which are established under the NWQMS
- The preparation and implementation of water quality management plans
- The development of levels of service provided by water authorities
- Effective community communication programs

Figure 1. National Water Quality Management Strategy



BOX 1. MANAGEMENT FRAMEWORK FOR APPLYING THE GUIDELINES



BOX 2. DOCUMENTS OF THE NATIONAL WATER QUALITY MANAGEMENT STRATEGY

DOC NO.	TITLE
	Policies and Process for Water Quality Management
1	Water Quality Management — An Outline of the Policies
2	Policies and Principles — A Reference Document
3	Implementation Guidelines
	Water Quality Benchmarks
4	Australian and New Zealand Guidelines for Fresh and Marine Water Quality
5	Australian Drinking Water Guidelines — Summary
6	Australian Drinking Water Guidelines
7	Australian Guidelines for Water Quality Monitoring and Reporting
	Groundwater Management
8	Guidelines for Groundwater Protection
	Guidelines for Diffuse and Point Sources*
9	Rural Land Uses and Water Quality — A Community Resource Document
10	Guidelines for Urban Stormwater Management
11	Guidelines for Sewerage Systems — Effluent Management
12	Guidelines for Sewerage Systems — Acceptance of Trade Waste (Industrial Waste)
13	Guidelines for Sewerage Systems — Biosolids Management
14	Guidelines for Sewerage Systems — Use of Reclaimed Water
15	Guidelines for Sewerage Systems — Sewerage System Overflows
16a	Effluent Management Guidelines for Dairy Sheds
16b	Effluent Management Guidelines for Dairy Processing Plants
17	Effluent Management Guidelines for Intensive Piggeries
18	Effluent Management Guidelines for Aqueous Wool Scouring and Carbonising
19	Effluent Management Guidelines for Tanning and Related Industries in Australia
20	Effluent Management Guidelines for Australian Wineries and Distilleries
21	Australian Guidelines For Water Recycling - Managing Health And Environmental Risks - Phase 1

**The guidelines for diffuse and point sources are national guidelines that aim to ensure high levels of environmental protection that are broadly consistent across Australia*