

TWEED SHIRE COUNCIL MEETING TASK SHEET

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Action Item - COUNCIL MEETING Tuesday, 15 February 2011

Action is required for Item **24** as per the Council Resolution outlined below.

TITLE: [CNR-CM] Integrated Water Cycle Management (IWCM) Strategy - Status Report

**Cr D Holdom
Cr P Youngblutt**

RESOLVED that:

1. Council notes the progress of the implementation of the Integrated Water Cycle Management Strategy.
2. The 2011 Integrated Water Cycle Management Strategy Action Plan contained within the report be adopted.
3. Council Officers bring forward a further report detailing the progress of the implementation of the Integrated Water Cycle Management Strategy actions in 12 months.

The Motion was **Carried**

FOR VOTE - Cr P Youngblutt, Cr W Polglase, Cr D Holdom, Cr B Longland, Cr J van Lieshout, Cr K Skinner
AGAINST VOTE - Cr K Milne

Agenda Report

TITLE: [CNR-CM] Integrated Water Cycle Management (IWCM) Strategy - Status Report

ORIGIN:

Water

SUMMARY OF REPORT:

This report provides a summary of the progress on the implementation of the IWCM Strategy and its 18 actions, last updated in January 2009.

The report also provides a quick reference table of **21 updated IWCM Strategy actions**.

RECOMMENDATION:

That:

- 1. Council notes the progress of the implementation of the Integrated Water Cycle Management Strategy.**
- 2. The 2011 Integrated Water Cycle Management Strategy Action Plan contained within the report be adopted.**
- 3. Council Officers bring forward a further report detailing the progress of the implementation of the Integrated Water Cycle Management Strategy actions in 12 months.**

REPORT:

Background

Integrated Water Cycle Management (IWCM) is the integrated management of the water supply, sewerage and stormwater services within a whole of catchment strategic framework and provides a long term focus on their integrated delivery.

Council engaged consultants Hunter Water Australia to prepare a Context Study & Strategy Report in order to define the catchment, water resource and urban issues faced by Council and to outline a broad strategy for the future. In December 2006 Council adopted the Integrated Water Cycle Management Context Study and Strategy Report incorporating 26 IWCM Strategy actions. On 27 January 2009 Council adopted an updated list of 18 IWCM Strategy actions identified to ensure that the objectives and updated priorities of the IWCM are being met.

This report to Council provides a summary of the status of the 18 IWCM Strategy actions, as presented to Council in January 2009. The actions are arranged under the headings of:

- Urban Town Water
- Urban Wastewater
- Urban Stormwater
- Urban Design
- Catchment Management

The table at the end of this report provides an updated list of 21 IWCM actions to be focussed on as priorities. A new heading of 'Overarching Strategies and Plans' has been added and some of the 18 actions have been split, to better present the actions, making them easier to follow and to track.

Progress on Implementation

Urban Town Water

Action 1 – Demand Management Strategy

The action set by Council in January 2009 has been completed. It required a Demand Management Strategy to be undertaken.

Stage 1 of the Demand Management Strategy and its recommendations which address demand management in both greenfield (new) and brownfield (existing) residential areas was adopted by Council on 17 February 2009.

Stage 2 of the Demand Management Strategy which addresses demand management in commercial and industrial areas and a summary report of both stages were adopted by Council on 19 October 2010.

In December 2010 Tweed Shire Council employed a Demand Management Program Leader whose main responsibility will be to implement the recommendations of the overall Demand Management Strategy.

An implementation plan for the Demand Management Strategy will be developed and brought forward to Council for adoption early in 2011.

Action 2 – Drought Management Strategy

The action set by Council in January 2009 has been completed. It required a Drought Management Strategy to be undertaken.

The Drought Management Strategy and its recommendations prepared by MWH were adopted by Council on 17 November 2009.

A water quality study of Clarrie Hall Dam was commenced in late 2010 by Hunter Water Australia, to investigate the nature and occurrence of and the most effective way in which to address stratification in the dam. Additional destratification capacity proposed will provide more capability in managing the existing water supply system generally and particularly during drought conditions.

The 'Drought' Business Continuity Plan prepared in December 2010 documents emergency response actions. These are triggered when Clarrie Hall Dam reaches the 25% level and a review of the performance and adequacy of water restrictions (Level 7) and emergency supply arrangements indicates they will not suffice for continuing drought conditions.

Council's drought management policy, water restriction triggers and targeted savings are to be reviewed within the next 12 months.

Alternative drought emergency water supply will be considered based on the outcome of the water supply augmentation project as it progresses.

An implementation plan for the Drought Management Strategy will be developed and brought forward to Council for adoption in the next 12 months.

Action 3 – Develop Risk Based Water Quality Management Plan

The action set by Council in January 2009 has been substantially completed through the development of Council's Drinking Water Quality Policy.

Council adopted the Drinking Water Quality Policy (Version 1.0) in December 2010. The policy formalises Council's position on and commitment to drinking water quality and its management, as recommended in the Australian Drinking Water Guidelines (ADWG).

Water Futures Pty Ltd carried out an assessment of Council's compliance with the ADWG, including a gap analysis. There are 12 elements in the ADWG covering a range of issues dealing with water quality, hazard identification and risk assessment, operational procedures, monitoring, management of incidents and emergencies, training, community awareness, research and development, documentation and reporting, evaluation and continual improvement.

Subsequently Council engaged Water Futures to address some of the high priority elements identified by the gap analysis. The project is about 50% complete. The most critical elements are practically complete and the remaining elements will be completed by Water Futures, Hunter Water Australia and Tweed Shire Council by end of June 2011.

Once the project is completed, the result will be fully compliant with the ADWG. Compliance with the Guidelines is a prerequisite for future funding opportunities administered by the NSW Office of Water (NOW) under the NSW Country Towns Water Supply and Sewerage Program. It is also a requirement of the NOW Best-Practice Guidelines.

Action 4 – Develop and Implement Leakage Reduction Plan

Work has been undertaken on the action set by Council in January 2009.

The Water Supply Network model has been used to identify low and high pressure zones. This was primarily done with a view to managing water pressure but the results will provide information for future pressure reduction activities.

Drop tests have been carried out on four reservoirs – Walmsley's in Tweed Heads West, Razor Back in Tweed Heads, Hartigan Hill in Murwillumbah and Burringbar. The NSW Water Directorate provided financial and hands on assistance with the drop tests. Leakage issues were identified in the Razor Back system and Aqua Environmental were subsequently engaged to carry out leak detection work across Tweed Heads and Cudgen. Two minor leaks were also found and repaired in the Burringbar zone.

Council was successful in obtaining funding assistance from the NSW Water Directorate for the leak detection work as well as the installation of permanent flow metering on the outlets of pump stations at Razor Back and East Banora.

Further funding opportunities through the Water Directorate are being investigated, to carry out a drop test on the reservoir at Kingscliff and install permanent flow metering at a number of major pump stations.

Historically, Council had already installed a number (approx. 28) pressure reduction valves throughout the water supply system. These valves were installed to address high pressure problems at the time but can now be used to manage demand as well.

A detailed leakage reduction plan is due to be developed as part of the Demand Management Strategy implementation in mid 2011.

Action 5 – Quality Management Plan

Work has been undertaken on the action set by Council in January 2009.

The DWE Best-Practice of Water Supply and Sewerage Guidelines (Aug 2007) encourage local water utilities such as Council to prepare and implement a Quality Management Plan (QMP). The aim of the QMP is to improve and provide consistent performance of Council's water supply and wastewater services, resulting in improved customer and stakeholder satisfaction.

The DWE Guidelines set out the key principles to be considered in the QMP namely: customer focus; leadership; involvement of people; process approach; system approach to management; continuous improvement; factual approach to decision making; and mutually beneficial supplier relationships.

While Council has not developed an overarching QMP at this stage, it has prepared and implemented a number of plans and strategies that address many of the elements that would be included in the QMP. Council's Community Strategic Plan, adopted in late 2010, represents leadership in many areas of Council's planning and operations. The Water Unit's Water Supply and Wastewater Activity Management Plans and Business Continuity Plan also address many of the QMP elements.

In particular, the Water and Wastewater Activity Management Plans are documented strategies based on corporate knowledge aimed at enabling continuing delivery of services and to ensure that stakeholder satisfaction is maintained.

The plans are the subject of ongoing monitoring, review and updating to incorporate changes to policies and procedures to improve the quality of asset management planning and accuracy of the financial projections. This process uses improved knowledge of customer expectations and enhanced asset management systems and data to optimise decision-making, review outputs, develop strategies and extend the planning horizon. Quality assurance audits of asset information are undertaken to ensure the integrity and cost effectiveness of data collected.

Peer reviews and internal audits are undertaken to assess the effectiveness with which the plans meet corporate objectives. Also, periodic internal audits are undertaken to assess the adequacy of water activity processes, systems and data, and external audits undertaken to measure performance against 'best practice'.

The status of Quality Management for particular Water Unit activities is shown in the following table.

Water Unit Activity	Status of Quality Management
Water and Wastewater Activity Management Plans	<ul style="list-style-type: none"> Prepared in 2007 and to be updated by July 2011
Asset Management	<ul style="list-style-type: none"> Monitoring of service levels via customer work request system Obtained from planned and reactive maintenance Proactive CCTV condition evaluation program for sewers
Maintenance Management	<ul style="list-style-type: none"> Strategy and implementation via MEX (computerised maintenance management system)
Operations Management	<ul style="list-style-type: none"> Manuals document procedures and information
Pipeline Renewals	<ul style="list-style-type: none"> Planning based on risk using 'AssetPlan'
Non Pipeline Renewals	<ul style="list-style-type: none"> Planning based on risk using ASSETIC is proposed
Valuations	<ul style="list-style-type: none"> Methodology documented and recently updated in July 2010
Levels of Service	<ul style="list-style-type: none"> Statements documented and currently under review Reflects community desires through public consultation (service level review)
Risk Management	<ul style="list-style-type: none"> Risk analysis and controls documented and annually reviewed in accordance with Council's Risk Management Processes Documented Business Continuity planning for priority risks
Knowledge Management System (KMS)	<ul style="list-style-type: none"> Documented Water Unit knowledge system, including library, plan register and operations and maintenance manuals

Policies Development	<ul style="list-style-type: none"> • Draft documented policies currently being reviewed and finalised
Performance Reporting	<ul style="list-style-type: none"> • Corporate, NWI & Government compliance reporting undertaken and comprehensive data management systems to be developed

Action 6 – Environmental Management Plan

The development and implementation of an Environmental Management Plan is also encouraged under the DWE Best-Practice Management of Water Supply and Sewerage Guidelines.

Council is following a new direction for environmental management due to Council's restructure and state government integrated planning and reporting requirements (i.e. Community Strategic Plan). There is a raft of management plans and strategies relating to environmental management of the catchments, including estuary management plans, a vegetation management strategy, a local action plan for greenhouse gas reduction, State of the Environment reporting and Standard Operating Procedures for works carried out by Council field staff. Any significant works will have Project Management Plans (PMP) and large projects also have specific Environmental Management Plans (EMP).

An overarching Environmental Management Plan is likely to be developed in future, pending resource allocation, to establish the overall context of these other plans and strategies.

Action 7 – Determine Preferred Option for the Augmentation of the Water Supply

The action set by Council in January 2009 has been completed. A Water Supply Augmentation Options study was undertaken to determine the best way to augment the water supply to meet the Shire's needs until the end of the planning period in 2036.

The first stage of the study was adopted by Council at its meeting of 20 October 2009. It identified nine options for analysis and ranked these options using multi criteria analysis (MCA) which include economic, social, environmental and governance considerations. It proposed a short-list of 3 options and a contingency option for further investigation.

In the second stage of the Options study (Fine Screen Report), these short-listed options were assessed in more detail to determine a preferred option. This stage was based on more detailed information and studies of the short-listed options, together with a comprehensive community consultation process to further inform the MCA. Additional detailed information has been sourced through:

- Additional consultants' reports focusing on environmental, cultural heritage, planning, and costing issues.
- Consultation with stakeholder groups including potentially affected landholders, the Aboriginal community, government agencies and community groups.
- Consultation with residents and the Tweed community through a comprehensive sixth month process, including facilitation of an independent Community Working Group.
- Improving ways for the community to provide feedback and submissions through a designated email address and Freecall 1800 number.

The Fine Screen Augmentation Options Report was considered by Council in October 2010. Council's preferred option was to construct a new dam on Byrrill Creek.

Action 8 – Procure Upgraded WTP at Tyalgum

Work is underway on the action set by Council in January 2009.

Works have commenced to build a new water treatment plant (WTP) at Tyalgum including augmenting components of the existing WTP. Council has chosen to construct a membrane filtration plant.

Council will seek Section 60 approval from the NSW Office of Water once the Design and Construct Tender for the treatment process has been finalised. A letter has been submitted to NOW seeking Stage 2 approval for concurrence and seeking retrospective funding under the NSW Country Towns Water Supply and Sewerage Program.

Building works have been completed to lock up stage and tenders for the membrane treatment process have closed. It is anticipated that construction and commissioning will be completed by the end of 2011. A specific report to the Council meeting in January 2011 provided detail on the contract status.

Action 9 – Investigate and Determine Requirement for Upgrading the WTP at Uki

Work is on hold until the Australian Drinking Water Guideline gap analysis is complete. The risks at Uki WTP will be assessed in light of the gap analysis report being carried out by Water Futures. This assessment will determine whether any action (management controls or upgrade) is warranted and whether external resources might be required. This will also determine the timeframe required for any remedial works or actions. A project manager will be allocated once the gap analysis is complete.

Action 10 – Implement Asset Management Plans – Water Supply

Work is underway on the action set by Council in January 2009.

The Water Unit's Water Supply and Wastewater Activity Management Plans provide detailed support in these areas to the Corporate Asset Management Plan. These are to be updated in 2011.

An Asset Engineer and Officer were appointed in 2010 which has increased the unit's ability to progress asset management and improvements.

The **Assetic** program is being implemented across Tweed Shire Council for valuation and financial asset management. Water Unit assets are in the process of being added to the Assetic program. The pipeline renewal program has been updated using the AssetPlan decision support system, with data currently being converted to be able to work in Assetic for renewal modelling.

It is envisaged that this process will be completed by the end of 2011. The asset management plans are required to dovetail with Council's Community Strategic Plan which was adopted by Council in December 2010.

Additionally, maintenance management, customer request, GIS, telemetry and SCADA, water quality and other data systems are being progressively developed to provide the matrix of inputs for asset management requirements. A risk-based maintenance strategy, risk-based pipeline renewal manual and an asset management manual have been developed for the Water Unit. Their implementation is being progressed through the development of various systems.

Finally, a risk-based approach under Council's Enterprise Risk Management Strategy is being progressively incorporated in the Water Unit's numerous asset management systems and processes.

Urban Wastewater

Action 11 – Optimise the Present Sewerage Infrastructure

Work is underway on the action set by Council in January 2009.

Council has undertaken flow gauging and monitoring in the catchments of East Banora Point, Tweed Heads Central, South-west Murwillumbah, South-west Tweed Heads and Bilambil Heights. The data is being analysed and modelled to determine any program of works required to abate overflows and optimise these catchments.

Council has prepared a Sewer Overflow Abatement Strategy. The Strategy identifies actions to be taken and those actions have been placed in the capital works and operational programs. The capital items have been included in future budgets, pending adoption, for implementation with the majority of items being completed by 2013.

Action 12 – Determine Options for the Augmentation of the Sewerage Infrastructure

Ongoing work is addressing the action set by Council in January 2009.

The Banora Point WWTP is being upgraded to increase its capacity from 50,000 EP to 75,000 EP with improved effluent quality. Construction commenced in September 2010 and it is anticipated that the upgraded plant will be operational by mid 2012.

While the Tweed Heads WWTP is currently decommissioned, Council has obtained approval to redevelop the plant to 10,000 EP, with equivalent effluent quality to the upgraded Banora Point WWTP, if and when required.

A new WWTP and associated reticulation conveyancing system are to be constructed to service the villages of Burringbar and Mooball. The construction of the WWTP and sewerage system is being managed by separate contracts with tenders for both closing on 22 December 2010. Works are expected to commence in March 2011, with completion and commissioning expected in late 2012.

Council resolved in November 2011 to support, in principle, a proposed stand alone private water and wastewater utility scheme for urban land release Area 9 in Mooball. It is proposed that Council would enter into an agreement with the utility service provider under an IPART licence to provide retail services. One of Council's conditions is that the developer/private utility company remains open to considering the future option of servicing urban land release Area 8 in Burringbar as well.

A Development Control Plan is being prepared for Area 'E' at Terranora. It is envisaged that the DCP will be ready for public exhibition in March/April 2011 with Council endorsement expected by August 2011. The development of Area E is likely to cater for about 4,000 additional people.

Infrastructure strategies have also been developed to concept stage for future developments at Cobaki Lakes and The Rise at Bilambil Heights. It is estimated that these developments, including Area E, would cater for up to 18,000 additional people. To cater for these new developments, further augmentation of the Banora Point WWTP would be required. Options for effluent disposal from the Banora Point WWTP would subsequently come under increased scrutiny, to consider options to relocate the effluent outfall and/or provide a higher level of treatment, to part and/or all dry weather flows, to maximise recycled water (effluent reuse) opportunities from the augmented plant.

An infrastructure strategy to concept stage has also been developed for future development at Kings Forest. It is envisaged that this new development would require the augmentation of the Kingscliff WWTP to cater for the estimated 11,500 additional people to be serviced by this new development.

A separate report is being put forward to Council relating to the augmentation of sewerage infrastructure to cater for development in South West Pottsville and the Hastings Point catchment.

Action 13— Effluent Reuse Opportunities

Work has been undertaken on the action set by Council in January 2009.

Options for effluent reuse were considered in the Demand Management Strategy. The DMS recommends that for West Kingscliff, recycled water be made available to future industrial land use areas where demand is identified. The DMS also recommends that Council continues to encourage effluent reuse schemes and other integrated water solutions that are sustainable in the long term proposed by developers of greenfield sites.

Council has already developed the following effluent reuse (recycled water) opportunities:

- Chinderah golf course – recycling up to 110ML/a from Kingscliff WWTP; operating since 2009
- Condong co-generation facility – recycling up to 584ML/a from Murwillumbah WWTP; operating since 2007
- Coolangatta Tweed Head golf club – recycling up to 250ML/a from Banora Pt WWTP; operating since 1987
- Tumbulgum turf irrigation – currently not in use; some minor use on taro crop since 1999; presently investigating future use on new turf farm
- Tyalgum pasture irrigation – recycling up to 19ML/a from Tyalgum WWTP; operating since 1987
- Uki Eucalyptus tree plantation – recycling up to 15ML/a from Uki WWTP; operating since 2004

Several other recycled water opportunities have been identified and are at various stages of investigation and design, including:

- Arkinstall Park and Memorial Gardens, Tweed Heads – recycling up to 230ML/a from Banora Pt WWTP; concept design completed 2008; design for Memorial Gardens due to start 2011
- Barry Sheppard Oval and Round Mountain pony club – recycling up to 200ML/a from Hastings Pt WWTP; currently under consideration
- Burringbar/Mooball recycled water scheme – recycling up to 20ML/a; can be pursued once the new WWTP is operating
- Chinderah Ti tree plantation – recycling up to 950ML/a from Kingscliff WWTP; under consideration
- Kingscliff recycled water scheme – recycling up to 180ML/a from Kingscliff WWTP; concept design completed 2005; to be revisited once future development in West Kingscliff becomes clearer
- Les Burger Field (rugby club), Bogangar – recycling up to 55kL/d from Hastings Pt WWTP; scheduled for construction Jan 2011
- Tweed Heads South industrial area – under preliminary consideration; will depend on Banora Pt WWTP upgrade and customer effluent quality requirements
- West Kingscliff residential area – to be investigated for future development
- West Kingscliff industrial estate – identified in the Demand Management Strategy as an option to be investigated prior to future development

In respect to new development, Council is willing to receive and assess submissions from developers who propose reuse.

Action 14 – Implement Asset Management Plans – Waste Water

See Item 10.

Urban Stormwater

Action 15 – Implement Targeted Retrofit Program for Retention/Treatment Hotspots

Ongoing work is addressing the action set by Council in January 2009.

The Tweed Urban Stormwater Quality Management Plan prepared in April 2000 identified a number of priority projects for improving stormwater quality. Some of these works have been completed (e.g. Jack Evans Boat Harbour at Tweed Heads and small gross pollutant traps in urban areas), while others remain unfunded.

Council has engaged Australian Wetlands to review the Urban Stormwater Quality Management Plan and to update it to reflect the philosophies of Water Sensitive Urban Design. This review is expected to be completed by mid 2011. The revised plan will provide a methodology for assessing the adequacy of existing stormwater quality improvement devices. It is envisaged that the list of stormwater quality 'hotspots' will subsequently be reprioritised and funded accordingly.

Council's Planning and Infrastructure Unit is updating D7, the development design specification for new development relating to stormwater quality. For this review, WSUD practices from SE Queensland are to be adopted where applicable.

Urban Design

Action 16 – Ongoing Implementation of WSUD and ESD Principles

Ongoing work is addressing the action set by Council in January 2009.

There are issues to be considered such as how developments are planned, education of the community and strengthening planning requirements. This consideration is being undertaken by Council staff and the results will be incorporated into the updated LEP and future revisions of subdivision and stormwater design specifications such as D7 mentioned above.

As part of the Demand Management Strategy options for dual reticulation and decentralised sewerage were assessed. It was found that in general dual reticulation and decentralised sewerage provided no advantage or additional advantage over the proposed implementation of BASIX, with 5,000 kL water tanks and reduced infiltration gravity sewers (RIGS).

Notwithstanding opportunities may arise for sewer mining in greenfield areas. Such opportunities will be dependent on the style of the development proposed and the willingness of the developer. Where opportunities are identified by the developer, Council will assess the proposals put forward.

Action 17 – Continue Liaison with Proponents of Developments to Promote WSUD and ESD

The Demand Management Strategy identified and analysed options for alternatives to rainwater tanks such as dual reticulation and stormwater harvesting. It recommended the use of rainwater tanks and did not recommend solutions such as dual reticulation, sewer mining and stormwater harvesting in existing areas.

Notwithstanding opportunities for sewer mining, recycling of water and other integrated water solutions that are sustainable in the long term may arise in greenfield areas. These would be assessed on a case by case basis.

Council Planning, Engineering and Water Unit staff continue to work collaboratively in assessing new developments with a view to promoting sustainable water cycle management options. Notwithstanding, Council has limited power to enforce WSUD and ESD principles in new developments approved under Part 3A of the EP&A Act.

Catchment Management

Action 18 – Complete a Drinking Water Catchment Management Plan

Work has begun on the action set by Council in January 2009.

The risk assessment process being carried out for the water quality management plan (Action 3) will broadly identify some of the hazards impacting on the drinking water catchment. A more detailed catchment management plan will be commenced, pending adequate resources, once Action 3 has been completed.

The Tweed River Committee provides direction on initiatives for items such as stream bank protection, planning controls, education and revegetation. The mandatory Water and Sewer Dividend Payment funds catchment and water quality improvement initiatives.

Council's On-Site Sewage Management Strategy has been implemented over the last 10 years and is currently being revised to bring it up to date. Notwithstanding an enhanced catchment risk assessment which includes the catchments of all water supplies is required to integrate the On-Site Sewage management Strategy into the Catchment Management Strategy.

Ongoing IWCM Strategic Actions

The 2011 updated IWCM Strategy Action Plan follows in the quick reference table below:

Item	Action	Activity	Status
Overarching Strategies and Plans			
1	Develop Quality Management Plan	Prepare overarching Plan linking existing subordinate plans and processes.	QMP elements addressed in Community Strategic Plan, Business Continuity Plan, Activity Management Plans. QMP to follow pending resources.
2	Develop Environmental Management Plan	Prepare overarching Plan linking existing subordinate plans and processes.	EMP elements addressed in Community Strategic Plan, Estuary Management Plans, Vegetation Management Strategy, SOE reporting. EMP to follow pending resources.
3	Implement Asset Management Plans	Update Activity Management Plans. Implement Assetic program. Update pipeline renewal program. Develop systems and implement plans.	Under way – plans to be completed by end of 2011. Implementation to follow.
4	Implement WSUD and ESD Principles	Review subdivision and stormwater design specifications on an ongoing basis. Update LEPs.	D7 to be reviewed by mid 2011. Ongoing submissions for LEP updates. Ongoing consideration of greenfield opportunities on a case by case basis.
5	Liaise with proponents of developments to promote WSUD and ESD	Continue to liaise with developers. Identify and consider opportunities as they arise.	Ongoing consideration of greenfield opportunities on a case by case basis.
6	Implement Water Education and Training	Implement the education and training programs associated with each of the individual IWCM Strategy actions	Council provides ongoing education and promotion for various IWCM Strategy Actions to schools, interest groups and the community.
Urban Water			
7	Adopt Demand Management Implementation Plan	Develop Implementation Plan.	Stages 1 & 2 of DMS complete & adopted by Council. Draft implementation plan due for Council consideration early 2011.
8	Adopt Drought Management Implementation Plan	Review strategy, water restriction levels and targeted savings. Conduct water quality study of CHD. Review emergency measures.	Strategy adopted by Council Nov 2009. Review by Nov 2011. Implementation plan due for Council consideration late 2011. Water quality

Item	Action	Activity	Status
			study by mid 2011.
9	Develop Risk Based Water Quality Management Plan	Review remaining elements identified in ADWG gap analysis. Ensure compliance with ADWG.	Drinking Water Quality Policy adopted Dec 2010. Gap analysis complete. High priority elements have been addressed – 50% completed as at Jan 2011. To be completed by mid 2011.
10	Develop and Implement Leakage Reduction Program	Seek further funding through NSW Water Directorate. Carry out modelling and analysis. Develop leakage reduction plan.	To be carried out as part of Demand Management Strategy implementation plan. Some zones have been completed. Leakage reduction plan due mid 2011 as part of DMS.
11	Determine Preferred Option for the Augmentation of the Water Supply	Review preferred option.	Preferred option to build new dam on Byrrill Creek adopted Oct 2010. Review in light of Water Sharing Plan pending.
12	Procure upgraded WTP at Tyalgum	Complete building works. Seek Section 60 approval once treatment process is finalised. Construction and commissioning.	Building works completed to lock up stage. Process construction and commissioning due to be completed end of 2011.
13	Investigate and determine requirement for upgrading the WTP at Uki	Assess needs in light of Australian Drinking Water Quality Guidelines gap analysis. Determine requirement for upgrade. If required, design and procure upgrade.	On hold pending completion of action 3.
Urban Wastewater			
14	Optimise Existing Sewerage Infrastructure	Create system model. Undertake gauging and monitor flows to calibrate model. Monitor wet weather performance of WWTPs. Complete Sewer Overflow Abatement Strategy.	Flow gauging completed at East Banora Point, Tweed Heads Central, South-west Murwillumbah, South-west Tweed Heads and Bilambil Heights. Actions from Sewer Overflow Abatement Strategy to be completed by 2013.
15	Determine Options for Augmentation of the Sewerage Infrastructure	Determine long range demand forecasts. Undertake Options Studies. Determine recommended options.	Banora Point WWTP being upgraded by mid 2012. Burringbar & Mooball sewerage system by late 2012. DCP being prepared for Area E – by Aug 2011. Infrastructure strategies under way for Cobaki Lakes, Kings Forest & The Rise at Bilambil Heights.
16	Maximise Water Recycling (Effluent Reuse) Opportunities	Assess proposals for reuse when presented. Continue to identify opportunities for investigation.	Ongoing. Several schemes operating. A number of others (9) at various stages of investigation and design. Demand Management Strategy implementation plan to look at other opportunities in detail.
Urban Stormwater			

Item	Action	Activity	Status
17	Review Urban Stormwater Quality Management Plan	Review Plan.	Plan review to be completed by mid 2011.
18	Update Development Design Specification D7 – Stormwater Quality	Update D7.	D7 to be updated by mid 2011.
19	Identify Targeted Retrofit Program for Retention/Treatment Hotspots	Prepare targeted program for stormwater retention/treatment hotspots.	Prepare Hotspot Plan once USQMP completed. Implement plan pending resources.
Catchment Management			
20	Review On-site Sewage Management Strategy	Review strategy.	Strategy to be updated by mid 2011.
21	Develop Drinking Water Catchment Management Plan	Review risk identification in three water supply catchments. Identify hot spots and determine strategies to minimise risk. Draft Catchment Management Strategy.	Risk Assessment to be carried out by mid 2011. Drinking Water Catchment Management Plan to follow pending resources.

LEGAL/RESOURCE/FINANCIAL IMPLICATIONS:

The 2011 Revised IWCM Action Plan relates to Council's core business as a Local Water and Wastewater Utility. This program of work requires significant resource and financial commitments to complete.

POLICY IMPLICATIONS:

Further policy development is required across the full range of the Water and Wastewater functions of Council.

UNDER SEPARATE COVER/FURTHER INFORMATION:

To view any "non confidential" attachments listed below, access the meetings link on Council's website www.tweed.nsw.gov.au (from 8.00pm Wednesday the week before the meeting) or visit Council's offices at Tweed Heads or Murwillumbah (from 8.00am Thursday the week before the meeting) or Council's libraries (from 10.00am Thursday the week of the meeting).

Nil.
