



Tweed Shire Council

Integrated Water Cycle Management Strategy

Public Exhibition - Submissions Report

May 2014

Prepared on behalf of Tweed Shire Council by Hydrosphere Consulting.

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PROJECT 12-020 – TWEED IWCM PUBLIC DISPLAY SUBMISSIONS REPORT

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1	Draft incorporating extra submission	R. Campbell	M. Howland	M. Howland	2 May 2014
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1. INTRODUCTION

Hydrosphere Consulting has undertaken a comprehensive review of the 2006 Tweed Shire Integrated Water Cycle Management (IWCM) Strategy on behalf of Tweed Shire Council (TSC). The purpose of the review is to ensure the long-term future direction of the Strategy is appropriate, considering the current or emerging challenges facing Council and the community desires for future water cycle management.

The revised Strategy was prepared during 2012 and 2013 with the following major steps:

- July – October 2012: Research phase and preparation of IWCM Background Paper (Hydrosphere Consulting, 2012);
- October – November 2012: Public exhibition of Background Paper and community consultation (including survey);
- 2013 – Preparation of revised IWCM Strategy (Final Draft for public exhibition, Hydrosphere Consulting, 2013);
- Jan 2014 – preparation of IWCM Summary Report (Tweed Shire Council and Hydrosphere Consulting, 2014), for public exhibition;
- January – March 2014 – public exhibition of Final Draft IWCM Strategy (Hydrosphere Consulting, 2013); and
- February 2014 – Community Information Sessions (refer Section 2).

Seven submissions were received during the public exhibition. Further details of the exhibition process and the submissions received are provided in the following sections.

2. EXHIBITION PROCESS

At the Council meeting of 12 December 2013, TSC resolved to place the Final Draft IWCM Strategy on public exhibition. The Final Draft IWCM Strategy (Hydrosphere Consulting, 2013) was placed on public exhibition between 6 January 2014 and 21 March 2014 (11 weeks). Public promotion of the exhibited plan included:

- Information on Council's website (<http://www.tweed.nsw.gov.au/IWCM> including a factsheet available for download, Council's "on Exhibition" page and "Have Your Say" page);
- Media release – 11 February 2014; and
- Articles in Tweed Link – 17 December 2013 and 14 January 2014.

The draft IWCM Strategy and supporting documents could be viewed online at www.tweed.nsw.gov.au/OnExhibition or at Council's Administration offices in Murwillumbah or Tweed Heads. Submissions could be made in writing by post or email.

3. COMMUNITY INFORMATION SESSIONS

Three community information sessions were held during the public exhibition period:

- Tweed Heads: Monday 17 February 2.00pm – 3.30pm,
- Murwillumbah: Monday 17 February 5.30pm – 7.00pm, and
- Pottsville: Wednesday 19 February 5.30 pm – 7.00 pm.

These locations were selected as they were centrally located to the main population centres of Tweed Heads, Banora Point, Kingscliff, Pottsville, Murwillumbah and Uki.

The sessions were advertised in Tweed Link, local newspapers and Council's website (refer Section 2). Invitations were issued to Councillors, as well as those on the IWCM Interested Parties Register.

The Mayor of Tweed, Councillor Longland attended the sessions, as did senior members of Council including the General Manager, the Director of Community and Natural Resources and the Acting Manager Water. During the sessions, Robyn Campbell of Hydrosphere Consulting presented the IWCM Strategy, and then provided an opportunity for attendees to provide comment or ask questions.

Eleven community members attended the sessions.

4. WRITTEN SUBMISSIONS RECEIVED

The seven submissions received during the public exhibition period are summarised in Table 1 together with a response to the points raised in the submissions.

The submissions are attached in Appendix 1.

Table 1: Summary of Written Submissions

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
1	Chris Cherry, President Pottsville Community Association	Abridged summary presented at community workshop did not include details of budget schedules, timing etc.	The full IWCM Strategy document (and Executive Summary) included a table showing proposed actions, timeframe and budget. This was available from Council’s website and administration offices.	None.
		Full Strategy devoid of IWCM infrastructure spending	<p>The implementation program identifies existing and new strategic planning actions that are recommended to achieve the desired IWCM outcomes. None of the IWCM issues identified directly requires investment in capital works in the next ten years. However, the outcomes of these actions may result in the identification of future capital works requirements.</p> <p>Expenditure for Council's asset renewal program and provision of infrastructure to service new growth areas is additional to the IWCM implementation program and will be directed by many of the outcomes of the IWCM actions, particularly climate change adaptation, sewer overflow abatement strategy, biosolids management strategy, integrated servicing strategies and recycled water opportunities.</p>	Include a comment explaining the relationship between the IWCM Implementation Program and capital works expenditure.
		Planned expenditure appears to be scheduled for northern half of Tweed coastal region with none allocated in southern half.	This is incorrect. The IWCM Strategy is shire-wide and addresses the entire Tweed River catchment and the catchment of the coastal creeks. Most actions are relevant to all parts of the shire and all Tweed residents will benefit from the improved water cycle management outcomes.	None.
		Southern half is lacking in planning for long-term infrastructure such as water supply and sewerage.	Council’s infrastructure planning responds to growth and development, infrastructure renewal requirements and maintaining levels of service where required in all parts of the shire.	None.
		Supports IWCM action to review population forecasts.	Noted.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Chris Cherry, President Pottsville Community Association (continued)	Concern about reliance on private sewer and water facilities and operation, maintenance and potential transfer to Council ownership.	Concern is also noted in the IWCM Strategy. The adequacy of provisions for “last resort” arrangements (e.g. failure of a private utility system) is currently being reviewed by the NSW government. The IWCM Strategy also includes an action to develop stronger policies for water cycle management to improve Council’s ability to apply IWCM objectives to private water utility schemes.	None.
		Suggested action for erosion and sedimentation controls lists existing controls only – action should be to review and improve controls and increase compliance levels.	Existing actions are identified in Option 16a. The level 3 action (Option 16b - Review and update erosion and sediment controls and provide increased resources) addresses this concern and is included in the IWCM Implementation Program.	None.
		Public amenities such as water feature in Seabreeze estate need to be maintained. Consider use of borewater.	Council has recently resolved to investigate alternative sources of water to maintain and operate the water feature in Seabreeze Estate. This is being addressed separately to the IWCM Strategy by Council’s Recreation Services Group.	None.
2	Roger Graf, Fingal Head	During the July 2005 flood, stormwater drains were unable to cope with tidal conditions and heavy rain. Consider upgraded stormwater drainage within hot spots, emergency response requirements, reuse of roof water or pond detention systems.	Urban stormwater management is addressed through climate change adaptation actions in the IWCM Strategy as well as Council’s flood management planning and urban stormwater management planning. Under BASIX, all new developments are required to install a rainwater tank to reuse roof water. The IWCM Strategy also includes an action to review the effectiveness of rainwater tanks (for demand management) and potentially implement a rebate for rainwater tanks.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
3	Samuel K Dawson, Coordinator Caldera Environment Centre (CEC)	Appreciates communication with community but seems to be “business as usual” attitude to water management in the shire – minimal effort with respect to water recycling and assumption that a dam is the best way to improve water supply.	<p>The IWCM Strategy has proposed a more integrated approach to water management planning including a substantial number of actions beyond the “business as usual” approach. The Strategy states that Council will consider future policy development and opportunities for increased water recycling as part of the development of the servicing strategies for greenfield developments that have not been approved by the State Government. This is a key component of the total water cycle management (TWCM) approach in this IWCM strategy.</p> <p>The IWCM Strategy summarises the water supply augmentation options considered to date, proposes additional demand management and potable substitution actions and acknowledges the need to determine the timing of any required supply augmentation and the quantity of additional water that will be needed before a preferred option is adopted. Supply-side options will be re-considered in association with potable demand reduction approaches at that time.</p>	None.
		High cost of new dam or raising the dam wall is not specified as an issue but high cost of recycling and biosolids management is. Policy appears to be a supply-side solution instead of managing waste.	As the need for augmentation of the water supply is not predicted to be required as soon as first thought, the IWCM Strategy does not identify the cost of augmentation of surface water storages as an issue to be addressed in the IWCM Strategy in the next 10 years. Conversely, the need for increased recycling opportunities and improved biosolids management has been identified and will require significant investment in the next ten years. The IWCM Strategy identifies that supply-side solutions are not required in the near future but instead places emphasis on increasing knowledge, developing opportunities for demand management, potable water substitution and adaptive management in parallel with confirming the timing and quantity of augmentation needs and any planning/lead-time considerations.	None.
		Water supply should be seen as a limit to growth.	The TWCM approach advocated in the IWCM Strategy recognises the linkages between land use planning and the effect on the overall water cycle and the need to identify key links between water supply, wastewater and stormwater servicing proposals and the measured health of the Shire’s waterways.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Samuel K Dawson, Coordinator Caldera Environment Centre (continued)	<p>Reproduced submission provided by CEC in 2012 (in response to Background Paper):</p> <ul style="list-style-type: none"> • Need for independent review of the option selection process, water demand management projections, projected population growth and the impacts of climate change; • Need for updated population forecasts and water consumption rates; • Need for Integrated Water Solutions to Tweed's Water Management; • The CEC is opposed to building of a new dam; • Accuracy of demand management strategy is questionable and independent review needed; • Concern about use of pesticides and herbicides near waterways; • Support for LEP controls for drinking water catchments; • Concern about cattle access to waterways within the drinking water catchment; • Support for recycled water in new developments; • 5,000L tanks should be mandated in DA approvals. Larger tanks of 10,000L are preferable to 5,000L. Rebates should be considered; and • With integrated solutions of recycling water and stormwater capture, and tanks this would solve the problem of water supply and contribute to a healthy river ecosystem. 	<p>The CEC submission acknowledges that it has not reviewed the Final Draft IWCM Strategy “with the attention it deserves.” The CEC submission received in response to the Background Paper has been addressed in the IWCM Strategy (refer Appendix 2) with the following actions which are included in the implementation program:</p> <ul style="list-style-type: none"> • Data collection – improved population and demand projections prior to identification of water supply requirements; • Climate change adaptation – surface water availability; • Integrated Council-wide IWCM delivery; • Various demand management actions; • Drinking water catchment planning; • Integrated servicing strategies and recycled water opportunities; • Implement water sensitive urban design framework; • Natural asset management; • Total water cycle management framework and sub-catchment plans; and • Review of effectiveness of rainwater tanks and potential rebate. 	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
4	Chris Hennessy, Principal Urban Water Manager, NSW Office of Water, Wollongbar	<p>Comments provided on Summary report:</p> <ol style="list-style-type: none"> 1. Why are Level 1 actions included if they do not fully meet NOW guidelines; 2. Issue 7 – What is SLR; 3. Issue 9 – Why is Level 1 substantial compliance with best-practice requirements; 4. Issue 18 – stated level 1 action does not appear to address issue; 5. Issue 19 – adopt achievable target for recycled water use. 6. Issue 20 – include “if possible” (Develop biosolids management strategy to improve water cycle outcomes and reduce costs); 7. Include Table 1 (Implementation program) from full report into summary report. 	<p>The Summary Report was prepared to assist the public exhibition phase. The IWCM Strategy document provides further detail as follows:</p> <ol style="list-style-type: none"> 1. Level 1 actions are fully funded actions already underway or planned through the existing 2006 IWCM Strategy and other Council initiatives (i.e. the Business as Usual scenario). Level 2 actions are additional (unfunded) actions that are the minimum required to meet the NSW Office of Water guidelines. 2. SLR stands for sea level rise. 3. Council does not fully comply with the best-practice requirements and current compliance (Level 1) is described as “substantial” in the IWCM Background Paper. 4. Issue 18 relates to compliance with the EPA licence conditions for Uki WWTP (pH and suspended solids). Council is currently implementing a suite of plant modifications to improve plant performance, particularly the removal of nutrients from the effluent discharge which would reduce the growth of algae in the pond (which affects the compliance with pH and suspended solids conditions). 5. The target of 15% recycled water by 2013 was adopted as part of the Demand Management Strategy. It is acknowledged that the deadline for this target has not been met. As stated in the IWCM Strategy, Council still intends to maximise recycling with consideration of any new opportunities as they arise. Given the uncertainties with the timing of any future recycled water projects, it is difficult to adopt a timeframe that is meaningful and realistic. Council will continue to report the percentage of water that is recycled against the 15% target. 6. Issue 20 – agreed that improved water cycle outcomes and reduced costs may not be possible. 7. The summary report will not be modified as this was prepared for the public exhibition phase. The implementation program is included in the full Strategy document to be adopted by Council. 	<p>It is considered that the IWCM Strategy document provides the information to address most of these comments.</p> <ol style="list-style-type: none"> 2. SLR will be included in the Abbreviations and defined in the report. 4. The response to issue 18 will be clarified. 5. The wording in relation to recycled water use targets and reporting will be modified to reflect this response. 6. The response to issue 20 will be clarified.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWC Strategy
5	Joanna Gardner, Byrrell Creek Landcare Group	Proposed dam at Byrrell Creek not an option due to environmental destruction of high priority riparian conservation area.	Noted. The IWC Strategy does not propose a dam at Byrrell Creek.	None.
		Hydrosphere has collated and reviewed a large portion of issues and proposed actions that could be implemented by Council. Some priorities and timelines could be adjusted. Needs concerted effort to ensure developments are substantially water self-sufficient and meet WSUD principles.	The IWC Strategy includes actions relating to demand management and WSUD. The timing for implementation of the currently unfunded IWC actions is dependent on the availability of financial and human resources. This Strategy assigns priorities with consideration of the limited internal resources available and is designed to remain flexible to access potential sources of external funding which may become available in future. However this will be tied in to development of Council's Environmental Sustainability Strategy (ESS) and the overall resourcing, funding and priorities set by this program. The ESS is in the early stages of development and an initial framework is expected to be completed in 2014. It is envisaged this would allow priorities for the IWC Strategy to be set in 2015.	None.
		Issue 1: IWC principles, responsibilities and priorities are not fully implemented across all Council units – is a key issue. How is this being achieved?	The IWC Strategy acknowledges that success of the IWC Strategy relies on the improved administration and coordination of water cycle related activities. The preferred approach documented in the IWC Strategy suggests this could be achieved through the introduction of a new IWC Program Leader role that will facilitate TWCM across TSC (as part of the Level 3 approach). Until this new position is filled, the IWC Stakeholder Group would continue to coordinate the implementation of the adopted IWC Strategy. The priority tasks for this position (or group) are the implementation of this IWC Strategy and integration with TSC's other strategic priorities.	None.
		Good to see more opportunities for community feedback.	Noted.	None.
		Draft IWC acknowledges need for revised population forecasts and water augmentation timing.	Noted.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Joanna Gardner, Byrrill Creek Landcare Group (continued)	Council's choice for augmentation is still based on dams – more integrated and holistic view incorporating stormwater capture and recycled water, rainwater tanks and groundwater sources is required.	The IWCM Strategy does not advocate a particular augmentation approach. The Strategy summarises the water supply augmentation options considered to date, proposes additional demand management and potable substitution actions and acknowledges the need to determine the timing of any required supply augmentation, the quantity of additional water that will be needed any planning/lead-time considerations before a preferred option is adopted. Supply-side options will be re-considered in association with potable demand reduction approaches at that time.	None.
		Major investments (Bray Park WTP, Banora Point STP) leave little funding or incentive for integrated water management approaches. Banora Point STP could have been built with extra filtration processes for recycled water for dual reticulation. Kingscliff STP could be upgraded to service Kings Forest and West Kingscliff with dual reticulation.	The provision of recycled water from Banora Point will be considered as part of servicing strategies for new developments in the area as they are progressed (e.g. Bilambil Heights and Terranora). The NSW government approved the Kings Forest development to connect to Kingscliff WWTP without recycling. The IWCM Strategy identified potential opportunities for water recycling for the developments of West Kingscliff and West Kings Forest (area 4).	None.
		Actions to address climate change should be ongoing (long-term)	The IWCM Implementation program includes ongoing risk assessment (every 4 years) in relation to climate change. Actions that may arise from these risk assessments have not yet been identified or included in the Implementation program.	The implementation program will include a comment that additional actions may arise from the risk assessments.
		Council is not complying with National Water Initiative and Best-Practice Management in areas of bulk stormwater harvesting and reuse, grey water reuse, green field reclaimed water use or water quality objectives.	The IWCM Strategy refers to the Office of Water best-practice guidelines which include six criteria that must be met (strategic business planning, pricing, water conservation, drought management, performance reporting and integrated water cycle management). Compliance is not related to the amount of water recycling or achievement of water quality objectives for waterways. Council complies with the relevant state and federal government guidelines for stormwater harvesting and reuse, grey water reuse, green field reclaimed water use and water quality.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Joanna Gardner, Byrrill Creek Landcare Group (continued)	Understand that NSW Planning approved greenfield sites without WSUD or water saving policies but suspect approval was provided by Council planners for this approach.	Council has no power to require developers to operate outside of the conditions of the Part 3A approval. What is possible is for Council to consider future policy development and opportunities for increased water recycling as part of the development of the servicing strategies for other greenfield developments. This is a key component of the TWCM approach in this IWCM strategy.	None.
		Cites state government strategies/policies (Far North Coast Regional Strategy Plan 2006, Weirs Policy) that encourage integrated water management.	These policies have been considered in the development of the IWCM Strategy where relevant and the proposed actions are consistent with current state government strategies/policies.	None.
		Recommendation to remain at status quo for promotion of rainwater tanks means developments will be approved with no substantial water saving. Supports incentive scheme to install tanks larger than required by BASIX and retrofit existing properties (minimum 10,000L tanks). Rebates should be considered to promote water savings.	The IWCM Strategy includes an action to review the effectiveness of rainwater tanks to verify the performance of rainwater tanks in the Tweed, identify any factors that improve performance and develop a rebate program based on the findings. Prior to promoting any major expenditure on rainwater tanks (by either TSC or property owners), data on the actual water savings and rainwater tank costs are required to demonstrate value for money. An allowance for the rebate has also been included in the implementation program.	None.
		Disputes statement that demand management and potable water substitution will not be sufficient to offset the need for a new supply source.	TSC's current demand management initiatives have resulted in significant per capita demand reductions. Additional measures recommended in this IWCM Strategy would further assist with demand reduction. The extent that demand management can offset the need for any supply augmentation will depend on the long-term success of the demand measures as well as the future population growth and future secure yield of water supplies.	The statement will be modified to indicate the need to confirm the requirement for a new water source.
		Total catchment management plan approach is very positive. Should include stock fencing, prohibited use of herbicides close to waterways. Streambank protection policy is supported.	Noted.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Joanna Gardner, Byrriil Creek Landcare Group (continued)	Council has shown no desire to support the use of recycled water in greenfield developments. Current council policy means no incentive for recycling. Acknowledges Council has limited ability to influence residential developments already approved by state government but pipe infrastructure for dual reticulation could be laid for the future. Council should consider future policy development and opportunities for increased water recycling as part of servicing strategies. Kingscliff STP needs upgrading and recycled water should be provided to Kings Forest and west Kingscliff development. Updated cost estimates for dual reticulation should be provided for comparison.	The IWCM Strategy includes an action to identify options for increased water recycling including for greenfield developments. The IWCM Strategy noted the need to pursue previously identified potential opportunities for water recycling for the developments of West Kingscliff and West Kings Forest (area 4). Cost estimates for dual reticulation in greenfield developments were provided in the Demand Management Strategy (MWH, 2009). The IWCM Strategy includes an action to develop Integrated Servicing Strategies which will provide further detail on the cost of servicing options.	None.
		WSUD should be implemented in all new expansion areas. Stricter regulation for subdivision earthworks is required.	The IWCM Strategy includes actions to develop WSUD policies, increase integration of WSUD across Council policies and procedures and review and update erosion and sediment controls and provide increased resources.	None.
6.	Northern Rivers Guardians	Supports revegetation of riparian areas in upper Tweed catchment and projects which maintain healthy waterways. Do not support proposed Dam at Byrriil Creek.	Riparian revegetation and waterway health are addressed through various (existing and proposed) catchment management actions in the IWCM Strategy. The IWCM Strategy does not propose a dam at Byrriil Creek.	None.
		Hydrosphere has collated and reviewed large portion of issues and proposed actions that could be implemented by Council. Some priorities and timelines could be adjusted. Needs concerted effort to ensure developments are substantially water self-sufficient and meet WSUD principles.	This comment is the same as the points raised by Byrriil Creek Landcare (submission 6) and is addressed in the response to that submission.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Northern Rivers Guardians (continued)	Issue 1: IWCM principles, responsibilities and priorities are not fully implemented across all Council units – is a key issue. How is this being achieved?	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.
		Good to see more opportunities for community feedback.	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.
		Draft IWCM acknowledges need for revised population forecasts and water augmentation timing.	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.
		Council's choice for augmentation is still based on dams – more integrated and holistic view incorporating stormwater capture and recycled water, rainwater tanks and groundwater sources is required.	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.
		Major investments (Bray Park WTP, Banora Point STP) leave little funding or incentive for integrated water management approaches. Banora Point STP could have been built with extra filtration processes for recycled water for dual reticulation. West Kingscliff STP could be upgraded to service Kings Forest and West Kingscliff with dual reticulation.	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.
		Actions to address climate change should be ongoing (long-term)	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Northern Rivers Guardians (continued)	Council is not complying with National Water Initiative and Best-Practice Management in areas of bulk stormwater harvesting and reuse, grey water reuse, green field reclaimed water use or water quality objectives.	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.
		Understand that NSW Planning approved greenfield sites without WSUD or water saving policies but suspect approval was provided by Council planners for this approach.	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.
		Cites state government strategies/policies (Far North Coast Regional Strategy Plan 2006, Weirs Policy) that encourage integrated water management.	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.
		Recommendation to remain at status quo for promotion of rainwater tanks means developments will be approved with no substantial water saving. Supports incentive scheme to install tanks larger than required by BASIX and retrofit existing properties (minimum 10,000L tanks). Rebates should be considered to promote water savings.	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.
		Disputes statement that demand management and potable water substitution will not be sufficient to offset the need for a new supply source.	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.
		Total catchment management plan approach is very positive. Should include stock fencing, prohibited use of herbicides close to waterways. Streambank protection policy is supported.	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Northern Rivers Guardians (continued)	Council has shown no desire to support the use of recycled water in greenfield developments. Current council policy means no incentive for recycling. Acknowledges Council has limited ability to influence residential developments already approved by state government but pipe infrastructure for dual reticulation could be laid for the future. Council should consider future policy development and opportunities for increased water recycling as part of servicing strategy. West Kingscliff needs upgrading and recycled water should be provided to Kings Forest and west Kingscliff development. Updated cost estimates for dual reticulation should be provided for comparison.	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.
		WSUD should be implemented in all new expansion areas. Stricter regulation for subdivision earthworks is required.	This comment is the same as the points raised by Byrrill Creek Landcare (submission 6) and is addressed in the response to that submission.	None.
		Request that Council place high value on maintaining biodiversity, adoption of best practice sustainable water management and proactively recognise predicted effects of climate change.	The IWCM Strategy addresses these points.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
7	Tweed Heads Environment Group Inc.	Refers to 2009 CWG recommendation for expert independent review of the water augmentation option selection process, demand projections, population growth and climate change impacts and suggests the community is being ignored on this point.	<p>The CWG recommendations were considered and addressed in the IWCM Strategy. Council's focus has changed since the 2009 Water Supply Augmentation Study (where the need to identify a new water source was considered to be urgent) to the current IWCM focus on improved data collection, which is in agreement with the CWG recommendations. In addition to the review of available data undertaken for the IWCM documentation, the IWCM Strategy will be subject to ongoing independent review of data including population forecasts, demand forecasts and secure yield.</p> <p>The IWCM Strategy summarises the water supply augmentation options considered to date, proposes additional demand management and potable substitution actions and acknowledges the need to determine the timing of any required supply augmentation and the quantity of additional water that will be needed before a preferred option is adopted. This was seen to be a crucial input to the comparison of water augmentation options. Although a new water supply source is not expected to be required as soon as first thought, it is considered appropriate to continue water supply planning including updating data on population growth, demand and system secure yield in parallel with the consideration of options. This will confirm the timing and quantity of augmentation needs and any planning/lead-time considerations.</p> <p>The IWCM actions relating to current and future (climate change impacts) secure yield studies are currently being implemented by Council.</p>	None.
		Provides opinions on the value of treated wastewater (that could be recycled) as a percentage of drinking water charge based on electricity costs.	There are many components to be considered when valuing and comparing water supply options. The TWCM approach seeks to consider the links between water supply, wastewater and stormwater servicing proposals and the measured health of the Shire's waterways. The IWCM Strategy also advocates development of a policy for future cost recovery as part of the identification of increased opportunities for recycling (Option 5c).	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Tweed Heads Environment Group Inc. (continued)	Questions why Council has not reused harvested bulk stormwater.	<p>Bulk stormwater reuse is occurring at Banora Point golf course and was considered by the developer of for the Rise subdivision.</p> <p>While the IWCM Strategy did not investigate particular water supply options, previous investigations conclude that stormwater harvesting is not a “one size fits all” solution and any proposal will need to be examined in detail to determine if it is suitable for application in the Tweed area.</p> <p>Stormwater is climate dependent and supply is not guaranteed during periods of drought or below average rainfall. The size of storage required for stormwater harvesting schemes needs to be large enough to capture the wet summer-autumn rainfall and store it to cater for the dry season (spring – early summer) demand. Compared to other source substitution options like recycled water and the rainwater tank requirements of BASIX, stormwater harvesting is generally less cost-effective but this is dependent on the size of the scheme and the existing infrastructure.</p>	None.
		Questions why Council has not reused grey water already on urban sites	<p>A fourth pipe system that would collect and treat greywater and blackwater separately for recycling of greywater to households and blackwater to open space was considered in the assessment of options for Greenfield developments (2009 demand management strategy). However there are a number of operational issues and higher capital and on-going costs associated with such a system.</p> <p>Grey water reuse can be implemented by individual households but requires the householder to comply with stringent guidelines and the potential health, odour and runoff impacts. As part of the current demand management program, TSC will consider the introduction of regulations to control non-residential internal fittings and fixtures, including taps, showers, toilets and urinals, as well as opportunities for grey water reuse and rainwater tanks.</p>	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWC Strategy
	Tweed Heads Environment Group Inc. (continued)	Questions why Council has not reused reclaimed water at new greenfield sites for external irrigation.	The IWCM Strategy addresses this in detail. The Strategy states that Council will consider future policy development and opportunities for increased water recycling as part of the development of the servicing strategies for greenfield developments that require future Council approval. This is a key component of the TWCM approach in this IWCM strategy.	None.
		Questions why Council has not maintained water quality objectives for the Cobaki and Terranora Broadwaters.	<p>TSC has prepared a Coastal Zone Management Plan (CZMP) for Cobaki Broadwater and Terranora Broadwater (Australian Wetlands, 2010) which provides a scheduled sequence of recommended activities that need to be undertaken to achieve the estuary management objectives. The objectives relate to improving the water quality and ecosystem health of the estuaries through revegetation of riparian zones, improving the quality of rural and urban discharge, protecting and enhancing habitat values, among other things.</p> <p>Modelling undertaken for the EIS for release of effluent from the Banora Point WWTP and a whole of catchment water quality model developed for the CZMP has demonstrated that the majority of nutrients entering the Broadwaters are derived from catchment discharge. The CZMP identifies degraded riparian zones in rural streams as a major problem to be addressed to improve water quality, with the intent of achieving greater compliance with water quality objectives. There is no single project, or set of projects that can achieve immediate attainment of water quality objectives. Council has worked on public and private land to implement riparian rehabilitation projects on 22 sites, comprising a total of 10 km. These works rely on the support and participation of private landowners. It will take many years to implement works of a sufficient scale to affect water quality on a whole of catchment scale, and many years for the works to take effect.</p>	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Tweed Heads Environment Group Inc. (continued)	Notes Tweed Shire Council's inability to finalise any new potable water saving proposal with large 'greenfield' developers at Bilambil Heights, Cobaki Lakes, Kings Forest and Terranora E.	<p>Council has no power to require developers to operate outside of the conditions of the Part 3A approval. What is possible is for Council to consider future policy development and opportunities for increased water recycling as part of the development of the servicing strategies for other greenfield developments. This is a key component of the TWCM approach in this IWCM strategy.</p> <p>The IWCM Strategy discusses the potential future opportunities for water recycling in future developments. As part of the total water cycle approach and the development of sub-catchment management plans, the land-use and development constraints identified would assist in the development of integrated asset management and servicing strategies.</p>	None.
		Supports a rainwater tank rebate program.	Noted. The IWCM Strategy includes an action to review the effectiveness of rainwater tanks to verify the performance of rainwater tanks in the Tweed, identify any factors that improve performance and develop a rebate program based on the findings. Prior to promoting any major expenditure on rainwater tanks (by either TSC or property owners), data on the actual water savings and rainwater tank costs are required to demonstrate value for money. An allowance for the rebate has also been included in the implementation program.	None.
		Notes the level of non-revenue water/water losses.	The IWCM Strategy includes expansion of the current water loss management program to include improved data collection and understanding of water loss components, a review of policies and procedures on standpipe use and access to mains water by water carters, Council staff and private individuals. These measures are intended to reduce the opportunity for theft, unmeasured usage and inaccuracies in metering and Implementation of a customer meter replacement program to improve measurement of consumption.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Tweed Heads Environment Group Inc. (continued)	IWCM information provided by the Tweed Shire Council makes little mention of the extensive community consultation of the Tweed District Water Supply Augmentation Project, completed in March 2010. Seeks independent review of the Option selection process; the water demand management projections; projected population growth; and that the impacts of climate change scenarios be carried out.	The CWG recommendations were documented in the Background Paper and were a key influence in the development of the IWCM Strategy. The CWG recommendations are addressed in response to the first point raised in this submission.	None.
		Notes that Tweed Shire Council is still proceeding with its two Dam water supply options without seeking an Independent Inquiry as promised to the Tweed Community CWG by the Water Team and not expand National Water Initiative (NWI) water reuse options	This is incorrect. Council has no current resolution in relation to the “two dam water supply options”. Council continues to improve knowledge of future demand and water supply availability and investigate water supply options as they arise. This is addressed in response to the first point raised in this submission.	None.
		Despite the continued consultation and investigations, key decisions such as water supply augmentation have not been satisfactorily progressed by Tweed Shire Council. Considerable community angst, not yet resolved, has been created and will continue to be contentious given the competing community desires.	The IWCM Strategy presents the most appropriate way forward to address these concerns through improved data collection and knowledge of future demand and water supply availability.	None.
		Discusses proposed catchment management measures and notes there are community concerns that the seeking of new catchment funding may not be justifiable as an allowable cost in Tweed District Water Supply Augmentation Project.	The consultation undertaken for the IWCM Strategy suggests the community would support catchment initiatives. The TWCM approach seeks to identify the most appropriate management regime and funding requirements for each sub-catchment considering all aspects of the water cycle from catchment to water supply consumer. Any future funding options will be discussed by Council and decided on their merits as they are raised.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Tweed Heads Environment Group Inc. (continued)	Concern about cattle grazing on “the grasslands edging the polluted Clarrie Dam” and “pollution during heavy rain events include uncontrolled drainage from public roads and private easements upstream of Bray Park Weir”	The IWCM Strategy includes an action to develop a drinking water catchment management plan as part of Council’s drinking water quality management plan which will identify the importance of these issues and the necessary risk management approach.	None.
		TSC’s belief that it is unlikely that water would be provided by SEQ Water during a drought situation seems unfounded and this matter should be further investigated by Council planners.	<p>This is based on previous advice from SEQ Water that they cannot guarantee supply to Tweed as well as the SEQ region during a drought (and that any drought supply would be at high cost). The drought-proofing of the SEQ region is based on serving that area only, not Tweed as well.</p> <p>Council continues to investigate options for supply from SEQ water grid for various operational scenarios based on balancing the supply from Tweed River and SEQ water grid.</p>	None.
		Notes that Tweed Shire Council Water Unit was not able to come to some flexible agreement with the nearby Banora point Golf Club for the supply of reclaimed water. That club has now closed a major part of its golf course because of drought conditions.	Any recycled water user is required to comply with legislation and regulations relevant to the end use. Management decisions for the operation of private commercial ventures are the responsibility of the golf course operators.	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Tweed Heads Environment Group Inc. (continued)	<p>Why would The Draft Urban Stormwater Quality Management Plan (Australian Wetlands, 2011) which has a strong emphasis on achieving water quality objectives for downstream waterways be any more effective than the 'failed' 'D7' Stormwater Quality Management Plan?</p>	<p>To clarify, the draft <i>Tweed Urban Stormwater Quality Management Plan</i> (USQMP, Australian Wetlands, 2012) has not been adopted by Council to date and sections of the plan are currently under review. TSC's Development Design Specification D7 – Stormwater (also currently under review) will complement the draft USQMP by detailing stormwater objectives/standards and prescribed stormwater management measures that comply with the draft USQMP and contemporary best-practice. Issues such as how developments are planned, education of the community and strengthening planning requirements are being considered by Council and incorporated into the updated LEP and future revisions of subdivision and stormwater design specifications.</p> <p>The TWCM approach in the IWCM Strategy includes improved integration of WSUD into TSC policies and procedures through an overriding framework for WSUD implementation. Much of the required documentation exists through TSC's current guidelines and can be supplemented by best-practice approaches provided by other government agencies such as Water by Design (South-East Queensland Healthy Waterways Partnership).</p>	None.
		<p>For many years Tweed Heads Environment Group Inc. and the Tweed Community have been lodging complaints about stormwater pollution from the Cobaki development earthworks draining into the sensitive SEPP 14 Wetlands, the Cobaki Broadwater, without any satisfactory remedy by Council. Hopefully, the Tweed Shire Council Final Draft Integrated Water Cycle Management (IWCM) Strategy 2014 will rectify this reported pollution.</p>	<p>The complaints about erosion and sedimentation from earthworks are addressed through Council's compliance and regulatory role. One of the issues addressed in the IWCM Strategy is the limited resources available to enforce the requirements of Council's development controls. The Strategy includes funding to review and update erosion and sediment controls and provide increased resources.</p>	None.

No.	Author	Summarised Content/Points Raised	Response to Submission	Proposed Amendment to IWCM Strategy
	Tweed Heads Environment Group Inc. (continued)	<p>The 2012 Tweed River Health Report does not provide any answers to remedying the Terranora and Cobaki Broadwaters pollution, now being evidenced as algal blooms in the Terranora Inlet and in the Jack Evans Boat Harbour.</p>	<p>The report cards provide results of water quality monitoring which highlight that managing nutrients is an ongoing priority in the Broadwaters and that the recommendations of the Coastal Zone Management Plan, discussed in response to a previous response to this submission, need to be pursued.</p> <p>A recent algal bloom in the Jack Evans Boat Harbour appears to be of marine origin and incidents of this nature are not addressed through Council's IWCM or catchment management strategies.</p>	None.
		<p>Considers that the focus of IWCM programs and activities should continue to be in those areas providing Tweed's drinking water catchment supply to Bray Park Weir and the Tyalgum Water Treatment Plant catchment.</p>	<p>The Tweed community and Council have expressed a desire for an IWCM approach that is broader than the original urban water focus. This recognises that all elements of the water cycle are interdependent and all aspects of land use and infrastructure planning should be integrated with the water cycle considerations. Hence the focus of the IWCM Strategy is on the whole catchment rather than just drinking water catchments.</p>	None.
		<p>The future harvesting of bulk stormwater and coastal groundwater supplies should also be protected from polluting development.</p>	<p>Bulk stormwater harvesting has been addressed previously in response to this submission. The TWCM approach advocated in the IWCM Strategy recognises the linkages between land use planning and the effect on the overall water cycle (including groundwater) and the need to identify key links between water supply, wastewater and stormwater servicing proposals and the measured health of the Shire's waterways.</p>	None.
		<p>Costly additional mid-catchment funding amounting to \$2.9 million dollars seems inappropriate when council are unable to currently fund the remediation of identified polluted downstream waterways</p>	<p>It is unclear where the amount of \$2.9m is derived from. Council's catchment management works are directed at achieving water quality objectives in the entire catchment. As part of the IWCM Strategy, the existing catchment management program will be enhanced through the TWCM approach.</p>	None.

REFERENCES

Hydrosphere Consulting (2012) *Six Year Integrated Water Cycle Management Strategy Review - Background Paper*, November 2012

Hydrosphere Consulting (2013) *Tweed Shire Council: Integrated Water Cycle Management Strategy*, Final Draft (for Public Display), November 2013

Tweed Shire Council (2014) *Integrated Water Cycle Management Strategy Community Information Sessions – Summary February 2014* (Internal TSC memo)

Tweed Shire Council and Hydrosphere Consulting (2014) *Integrated Water Cycle Management Strategy – Summary Report for Public Exhibition*, January 2014

APPENDIX 1 – WRITTEN SUBMISSIONS

Alex Manning

From: Pottsville Community Association <pottsville2011@gmail.com>
Sent: Friday, March 21, 2014 4:03 PM
To: Corporate Email
Subject: Email from Pottsville Community Association - Submission - Integrated Water Cycle Management (IWCM) Strategy 2014

Dear Mr Green,

Thankyou for the opportunity to provide comment on the Draft Integrated Water Cycle Management Strategy. We hope you will consider the following comments when you fianlise this draft document.

We noted that the Abridged Summary presented at the community workshop which was attended by our members did not include any details of any IWCM Works - no details of Project Budgeting, Schedules, Commencement and Completion Dates. It was also found that the full Strategy was almost totally devoid of any actual IWCM Infrastructure construction spending. We found that the entire \$9 Million would appear to be scheduled to be spent in the Northern Half of the Tweed Coastal Region and that none of the money appears to be allocated to the Southern Half of the Tweed Coastal Area.....Bogangar/Cabarita/Tanglewood/Duranbah down to the Southern Border of the Tweed Shire.

There is a strong belief among our members that the southern half of the Shire is lacking in planning for future long-term infrastructure, such as water supply and sewerage and that the reliance on private facilities, although understandable in the short term when Council has already fully extended its resources in Kings Forest, Cobaki and Terranora, needs to be complemented with a long term plan for future infrastructure in this area.

For the possible 20,000 population increase in the Shire there should be forward planning for a direct, cross-country, water supply from the Clarrie Hall Dam to the Region. There should be forward planning for a Full-Service Sewer Treatment Plant equivalent to the Cudgen/Kingscliff Plant now that the last small bit of Sewer Capacity at the Hastings Point/Round Mountain Treatment Plant has been allocated to the West Pottsville Industrial Park Development. The only remaining capacity is now set aside for the High School at Seabreeze Estate.

There should be forward planning for the Water Towers, and the Pipes and Pumps to service them, running to the carefully allocated and Planned Sites for the Hospital, Shopping Centres, Ambulance, Police, Fire Brigade, High School and Primary School, Playing Fields, Parks, the Neighbourhood-Connector Road Corridors for the Public Transport Network. To the best of our knowledge none of this Strategic Planning has been carried out and we in the Pottsville Community Association think that this is urgently necessary. This matter was raised at the last meeting of the Association and we have undertaken to keep the Community advised of your response.

We therefore strongly support the proposed Action to review population forecasts to get a robust and defensible position which enables appropriate planning. We believe this would remove a lot of the inconsistencies which exist in those figures forecast previously in times of economic boom and those which have eventuated. These figures should be consistent with the 2011 census data and represent an accurate measure of the present figures and those realistically forecast in the next 10 – 20 years in already approved developments.

Reliance on private facilities for sewerage and water raises deep concern regarding the operation, maintenance and eventual potential transfer back to Council ownership and the costs involved in this.

Issue 23 identifies that existing subdivision erosion and stormwater controls are not adequate, but the suggested action on this issue simply lists these existing controls. The action should be to review and improve the controls and increase the compliance levels on these controls.

In a general comment, public amenities, such as our water feature in Seabreeze estate, still need to be maintained. Council can change their policy not to approve such features in the future in new developments but it is unacceptable to withdraw the provision of an existing amenity. Council needs to find a fairer solution and our Association would hope that use of borewater may be considered in these circumstances.

Regards

Chris Cherry

President

Pottsville Community Association.

From: Roger Graf
To: Corporate Email
Subject: Feedback on the reviewed Integrated Water Cycle Management (IWCM) Strategy
Date: Sunday, 16 February 2014 11:24:50 AM
Attachments: [image001.gif](#)
[image002.jpg](#)
[image003.jpg](#)
[image004.gif](#)

To Whom It May Concern:

Feedback on the reviewed Integrated Water Cycle Management (IWCM) Strategy
Dear Sir/Ma'am,

My feedback is limited as I have only reside at the address below for 10 years, however I have observed during those 10 years the following that deserves me to respond to your Integrated Water Cycle Management (IWCM) Strategy.

My observations in July 2005 was the time when a flood at my premises which was millimetres from my door, both rear and front. My conclusion to this phenomena was; extreme downpour within 24 hours, Main Road and Healy Lane [south] were both under flood approx. mid-morning due to storm water drains unable to cope with tidal conditions of Tweed River and downpour of rain. The water was actually being pushed up from the stormwater drains which consequently had an outcome upon our own drainage system which was unable to push the water away from the premises. Thus local flooding of the area.

My concerns as a population, we are building more residencies thus reducing the ability for normal drainage upon the earth resulting in slabs and foundations taking up the natural ability for normal drainage which results in increase volume of water being supplied from the residency roof tops to the downpipes and into the stormwater drainage system.

The problem is the infrastructure of the stormwater drainage piping within the TSC. No doubt when the infrastructure was positioned back [when] the residency was nowhere near what is expected within the next hundred years or 'at present' TSC need to consider placing within hot spots of the shire, storm water drains that will cope with; population density [increase roof area], extreme storm surges, increase water levels upon the river and creek systems during storm surges, and levee banks to mobilise emergency evacuation along roadways where flooding is imminent.

Another alternative is to reduce the amount of drainage from rooftops to stormwater drains by requiring all new developments to utilising rooftop drainage as for flushing toilets, dishwashing [manual or mechanical], external taps for gardening and other needs and laundry where all flow from the rooftop is absorbed with the perimeter of the residency either within the garden or if strata title within the complex gardens etc. This needs to be considered as a high priority or to consider recycling ponds within communities to absorb run-off from roofs to go to localities where ponds can be drained by natural absorption/precipitation or as a back-up for firefighting/dry spells.

For your consideration.

Respectfully,



Roger Graf
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☎ +617 55130588
e suerog.au@gmail.com
date: 16 Feb. 14



Please consider the environment before printing this email



21/03/2014

To the General Manager Tweed Shire Council

Submission by the CEC for the IWCM 2014

Introduction:

The Caldera Environment Centre (CEC) would like to make the following submission into the IWCM plan for the Tweed.

It is appreciated that the council takes the time and effort to communicate with and poll the community attitudes in regards to the IWCM and various water augmentation options. However, in spite of these democratic and community minded engagements, there still seems to be a business as usual attitude to water management in the Tweed Shire. By this we mean to say, there is minimal effort being made in respect to water recycling and reuse and a tacit assumption that some form of dam is the best way to improve the Tweed water supply.

The CEC, as a volunteer organisation has not had the time available to review the documentation supplied with the attention that it deserves. However from our initial inspection we are confident in once again resubmitting our earlier submissions to keep the council aware of the fact that it is failing to do enough in terms of water management. Glib lines such as the following indicate that council is unwilling to take a more proactive role in water recycling:

Issue 19: Council and the community have a desire for increased water recycling but there are significant barriers to implementation of recycled water schemes within the Tweed Shire

and;

Issue 20: There is a high cost of sustainable biosolids management

There are high costs in constructing a new dam or raising the wall of an existing dam also, yet these are not specified as "issues". This would seem to indicate a bias in the council towards water supply as opposed to water reuse and recycling. For years the council has been claiming that recycling is too hard and not mentioning the cost of dams or implying that have somehow already been accounted for by purchasing land at Byrrill Creek for instance; this has created a self-fulfilling prophecy, an institutional mantra that has pre-disposed policy towards a supply side solution instead of working on managing waste.

Given that economy is about the management of scarce resources, and in Australia there is no resource more scarce than water, even in an area like the Tweed which has a comparatively high rainfall; it then follows that management of existing water infrastructure needs improvement and more effort needs to be put into recycling water as this is necessarily the most economical way to

conserve our scarce water resource. Increasing supply need only be considered when all other options have been exhausted.

Also it is imperative that water supply be seen as a limit to growth. This concept is still anathema to the current Western economic paradigm (and so once again limits are not mentioned in the IWCM but veiled behind jargon like 'robust and defensible population forecasts'); but our society is increasingly pushing against nature's limits and "supply augmentation" can only stave off the inevitable for a short period of time. Without a properly long-term vision that is measured in decades, water (and most other local planning) issues will continue to fall victim to the tyranny of small decisions.

In concluding our introductory remarks, the CEC would like to endorse the submissions made by Tweed Heads Environment Group and Byrrill Creek Landcare.

Below is the submission mad by the CEC in 2012. We consider the comments still valid, because as some of the details of the 2013 IWCM have changed, its philosophy has not. Similarly, our philosophy remains the same.

Summary

Tweed Shire Council needs to undertake an Independent Review of the IWCM documentation. This was recommended by the Community Working Group in 2010, and it still has not happened. The authors of the council water documents are consultants MWH, who also wrote the technical documents for the failed Traveston Dam. A partial review by GeoLink found that council has overestimated water demand by 15%. No effort has been made to correct this figure or explain the bad maths

Council is proceeding with the two dam options for increasing water supply without; a) having an independent review of council documents, b) seriously investigating water recycling technologies

Missed opportunity: Only 4.8% of Tweed Water is reclaimed (Tweed State of The Environment Report 2010/11). This is well behind the national average, with 50% of Australian households now using greywater. The Sydney Olympic Park Authority has been using recycled water in homes for over 12 years and even new suburbs on the Gold Coast such as Pimpama/Coomera integrate water recycling into their design. Why is the Tweed so far behind?

Partially treated effluent and stormwater runoff is dumped into Terranora and Cobaki Broadwater, this has caused these areas to become polluted. The water could be intercepted and reused for irrigation of sports fields and other non-drinking water uses

Population: The availability of drinking water is a limiting factor to population growth. An investigation is needed to determine the sustainable carrying capacity of the Tweed Shire in terms of water availability. Such an investigation should be independent of council.

Councillors have been unable to reach a decision over water supply. This indicates that greater emphasis needs to be placed upon water recycling and reuse technologies as this would reduce dependence on a single water source

Beyond BASIX: the NSW sustainable building regulations, as part of the BASIX requirements a 3000L rainwater tanks is required, TSC has previously claimed credit for this NSW government initiative and has to offset the 'savings' against water supply augmentation requirements (GeoLink 2010). Tweed Council needs to do MORE than claim credit for NSW state policies and has to make a genuine effort to promote large rainwater tank installation in urban areas (>10 000L)

Clarrie Hall Dam catchment is probably the only drinking water catchment in Australia where unrestricted cattle grazing is permitted. Similarly livestock have unrestricted access to much of the Tweed and Oxley rivers above Bray Park Weir. Cattle faeces, fertiliser runoff contribute to an increased nutrient load both in the catchment of the Clarrie Hall Dam and Bray Park Weir; how long will council be held hostage by cattle graziers who refuse to fence their cows off from the creeks?

Dams are not a solution to the water supply option. Firstly, no significant effort has been made by TSC to recycle or reuse any amount of water prior to considering a new water supply; dual reticulation seems to be beyond comprehension to council. Secondly, minimal effort has been expended on water savings technologies, rainwater tank incentives are at the bare minimum, and water saving device rebates are sporadic. Thirdly, no independent review has been made of council documentation. An independent review was requested *three years ago* by the community. Council documents have been found to contain errors and overestimations of water consumption and no effort has been made by council to clarify these mistakes.

General Comment

In recent times Tweed Shire has made great progress by reducing the per capita water consumption. There have major technological advancements in the past 20 years in the realm of water conservation. These technologies, developed in response to the water shortages are now available and ready to be utilised in urban areas to provide alternative supply to urban areas. The Sydney Olympic Park Authority has provided an excellent example of how a master planned community can develop a water saving culture, and demonstrates that recycled water is safe and cost effective. With 90% of water for household use, in the SOPA area, being supplied from non-dam use, it is possible that with strategic implementation of recycled water, overall water demand from dams in urban areas across the shire could be decreased with a comparable investment in water recycling technologies retrofitted to established urban areas instead of investment in the large capital cost of a new dam.

The Tweed Shire is one of the wettest places in NSW and there are other alternatives that the council can pursue with greater vigour; such as big rainwater tanks on urban residences and improving water recycling and reuse within new developed areas, stormwater harvesting is another option. However the two preferred options of the councillors are: i) Raising Clarrie Hall Dam and (ii) Constructing a new dam at Byrrill Creek.

Economic arguments about cost being a prohibitive factor to developing water recycling technologies are a self-fulfilling prophecy. Cost has only become a factor because of ingrained institutional and social prejudice against recycled water that has derailed debate and postponed action. Cost is only a factor now because the political will does not exist within the current council system to make sustainable decisions; it is a weak excuse. The inability to incorporate dual reticulation and other more advanced elements of Water Sensitive Urban Design into modern

greenfield developments has been compounded by the failure by council to admit its past intransigence, and there has been no leadership amongst councillors or council staff on water recycling. Because of historical inaction and cultural prejudice rational decision making has been tossed aside in favour of a rationalised decision making process that conforms to local cultural norms, i.e. a new dam is to be built because that is what has been decided by the council 30 years ago.

A False sense of security

Dams are certainly part of the overall water supply matrix. Dams should not be seen in isolation from other water saving and recycling technologies, but as one input among many. Rainwater tanks provide a meaningful way for householders to take greater responsibility for water use and decrease demand on dam supplies. Water tanks of sufficient size to provide water over an extended period should be 20 000L.

The reliance of urban areas on a single point source for the water supply has been shown to have considerable health risks. This was most obvious in Sydney after the 1998 water crisis when giardia and cryptosporidium infected Warragamba Dam. Dams are breeding places for algae and bacteria; the water is still, stratified and high in nutrients; perfect conditions for eutrophication. While contingencies plans can be made and policies and guidelines developed, the risk of bacterial contamination is ever present from dam reservoirs. Water recycling technologies manufacture water to a cleaner standard than dam water.

Mistakes and Errors

The perceived shortfall in the water supply of the Tweed Shire as claimed by the local council authority in the *Tweed Shire Council Demand Management Strategy (2009)* and which has been used by the council to justify the need for a dam has been proven to be in error, by overestimating the future demand of water by nearly 15%. The Council also claimed water savings made through the BASIX regulations as its own initiatives (Geolink 2011 *Tweed Shire Demand Management Strategy and water supply Augmentation A brief Technical review*). However, the point to be made here is that the existing water supply is more than adequate. If supplementary water is needed then alternative sources of water should be utilised including rainwater tanks and grey water recycling. Employing such technologies will negate the future need for a dam.

The Tweed Shire is developing from a largely rural population and economy to a more urban population with the associated demands in water. In the Tweed Shire the existing water storages will be able to satisfy demand up until 2035 and population growth is slowing (TweedLink 26/6/2012) which means that expected demand forecasts will be delayed. The Tweed Shire council has implemented minimal water saving or recycling technologies, and is now considering the need to augment its water supply through increasing existing dam capacity or construction of a new dam.

Existing storages are fine, and adequate to meet current needs however, they need to be complimented by 21st century water saving technologies and public education that aims to increase social acceptance of water recycling technologies. This will prevent the need to augment water supplies by increasing existing dams or building new ones

Disappointing Consultation

In 2009 the Tweed Shire Council initiated the Community Working Group (CWG), to provide community input into a multi-criteria analysis that was to inform the council staff recommendation of preferred options to the councillors. Councillors summarily dismissed the staff's recommendations and scoffed at the community input and went ahead with their own individual preference to build a new dam rather than to increase the size of the existing dam.

Some assumptions made during the TSC Multi Criteria Analysis as part of the CWG process have since been invalidated (Geolink 2011).

These include:

- The rate of population growth, The DMS assumes a faster population growth rate than is actually occurring (Tweed link Issue 766 p.1 - 26/6/2012).
- Projected consumption figures in the TSC DMS (2009: Table 4.3) have been reviewed by external experts and found to be overestimated by at least 5% and up to 14% (Geolink 2011)
- Claiming NSW government BASIX regulations as council initiatives or options (TSC DMS 2009)
- Claiming that 30 000 ML from a new dam is needed to provide for an estimated 3000ML deficit in exiting supplies
- Failure to properly quantify prices of recycled water, assuming that they are "too expensive" without explaining why or providing comparisons

The result has been the assertions made by the council about the need for a dam is disputed by a large section of the community given the obfuscation of figures and disregard of rate payer funded community consultation input by elected representatives.

Clarrie Hall Dam

The primary water supply for the Tweed Shire is the Clarrie Hall Dam (CHD). The Tweed Shire Council is currently implementing an excellent program designed to improve water by working with landholders on riparian land that are tributaries to the Tweeds primary water extraction site at the Bray Park weir in Murwillumbah. Water is pumped from this site throughout the shire's 6000 + km of pipes and into the 70+ reservoirs.

The irony is that despite the council's best intentions cattle grazing and associated farming practices including broad acre herbicide and fertiliser application are occurring within the catchment of the CHD. Similarly within the immediate catchment of the weir cattle have unrestricted access to the reservoir. There are no controls on pesticide use by farmers on the catchment above Clarrie Hall Dam. Compare this to the catchment of other dams in the capital cities where public access is restricted and farming enterprises are banned, there are strict controls on water supply practices in those areas. Council needs more power to manage agricultural practices that are non-point pollution sources contaminating the urban water supply.

CHD has a secure yield of 13 750 ML, adjusted for 2002 drought. The future expected demand is not expected to exceed the level of secure yield until 2023-2030. Estimated future water demand is 16

750ML, leaving a 3000ML shortfall. Raising the existing dam will provide 7 170 ML secure yield and building a new dam at Byrrill Creek will create 8 700ML secure yield, both of which are in excess of the 3000ML shortfall anticipated by 2030. However the councillors have decided to vote in opposition to the recommendations of their own staff and community advice, deciding to build the largest option possible that of a new dam.

Water and Society

When a society considers damming its watercourses, it is invariably because it has not got its eyes on the well-being of water, but is involved in its exploitation. Water, like air has always been a given. But if the society is intrinsically unsustainable as ours is, then attention has to be paid to water; it can no longer be treated as just a given; it has to be protected lest it disappear in accord with a civilization that sees all of nature as resources to be exploited and has no vision for what happens when they are all gone.

The antidote to excessive resource exploitation involves the reduction of all industry in accord with movement into a post-industrial world. That does not mean there is a sudden retreat from industry, but there is steady movement away from it.

The winding back of industry in regard to water involves the recognition of the already existent huge area of roof in the Tweed Shire that is an in situ technology that is underutilised for water harvesting. The disadvantage of roof area in terms of blocking the return of water to underground aquifers are, in the best tradition of Permaculture, seen as assets rather than as liabilities. While there is disadvantage in the existence of surfaces that prevent the return of water to aquifers, if the water from these surfaces is harvested for human use, rather than dams built, the aforementioned disadvantage begins metamorphosing as an advantage.

Water and Population

The supply of water needs to be seen as an ultimate limit to population growth in the state. The amount of water is a de-facto measure of the land's carrying capacity. Simply creating more and larger water storages does not automatically result in a linear increase in population capacity. There are other effects to consider such as eutrophication, destruction of landscape values and species loss that need to be factored into the ability of the land to support a human population. If, as historical trends indicate, an increase in irrigation water results in an increase in salinization and the concomitant loss of agricultural land and natural areas, then the capacity of the land to support an ever increasing population is decreased on the one hand, while increased on the other. Increasing population without policy means that future generations will receive ever decreasing proportions of the wealth we now enjoy

Yours Sincerely



Samuel K Dawson
Coordinator, Caldera Environment Centre

Alex Manning

From: Robyn Campbell <robyn.campbell@hydrosphere.com.au>
Sent: Thursday, March 06, 2014 9:33 AM
To: Alex Manning
Subject: FW: Tweed IWCM Comments

Hi Alex

Chris Hennessy has provided comments on the summary report. We could consider if these changes should apply to the main report as well. We can discuss once the public display period is complete.

Regards

Robyn Campbell
Senior Environmental Engineer
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PO Box 7059
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www.hydrosphere.com.au

From: Chris Hennessy [<mailto:Chris.Hennessy@water.nsw.gov.au>]
Sent: Wednesday, 5 March 2014 11:47 AM
To: Chris Hennessy; Robyn Campbell
Subject: Tweed IWCM Comments

Robyn

As discussed

Comments on Summary report:

1. P5 of Summary. Table says Level1 actions are funded but do not meet NOW Guidelines. Why bother?
2. Table 3, Issue 7. What is SLR?
3. Issue 9 says substantial compliance with BPMG including IWCM?
4. Issue 18. Says pH and SS licence reqmts need reviewing. Actions says look at nutrient reduction?
5. Issue 19. Adopt achievable target if 15% too ambitious and/or time line for increase.
6. Issue 20, Level 2.(say) if possible.

Plus suggest putting Table 1 from full report into summary report.

Full report looks standard to me.

Sydney may come back with some comments on it.

Regards

Chris Hennessy

Principal Urban Water Manager

NSW Office of Water

T 02 6626 1362 | *M* 0429 863 123 | *F* 02 6628 6051

Wollongbar Primary Industries Institute

1243 Bruxner Highway | Wollongbar | NSW 2477

chris.hennessy@water.nsw.gov.au | www.water.nsw.gov.au

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Byrrill Creek Landcare Group
PO Box 3322 Uki, NSW 2484
J. Gardner 02 66797039



19 March 2014

The General Manager
Tweed Shire Council
Murwillumbah

Re: Final Draft Integrated Water Cycle Management (IWCM) Strategy 2014 - Tweed Shire Council

Dear Sir,

Byrrill Creek Landcare Group wishes to make the following submission in regards to the above matter.

As a landcare group, who have been revegetating riparian areas in the upper Tweed catchment, our priority is in maintaining healthy water ways, and pursuing sustainable solutions to water management. We also consider the proposed dam at Byrrill Creek not an option due to the environmental destruction to one of the highest priority riparian conservation areas in the Tweed.

As a member of the CWG committee who examined Tweeds Water Augmentation options, it is interesting to note that some of the recommendations from this committee are now included as a necessary action within the Draft IWCM:

Community Working Group on Water Augmentation: Statement March 2010:

"We propose an independent review of the water demand projections be carried out, including:

- *population growth projection*
- *the potential impact of current and additional demand management strategies*
- *alternative in-catchment bulk water supply options (stormwater harvesting and re-use programs), and*
- *the impacts of climate change scenarios.*

Such a review, undertaken by a reputable scientific institution (e.g. University of Technology, Sydney or the CSIRO), would clarify whether the actions currently proposed under the water supply augmentation process are warranted. "

We acknowledge that Hydrosphere has collated & overviewed a large portion of Tweed Council water related issues and proposed actions that could be implemented by council. Some of the priorities and timelines could be adjusted and we feel there primarily needs to be a concerted effort to ensure new developments are substantially water self sufficient and meet WSUD principles, which is not the case in the Draft IWCM.

The proposed 60 IWCM Actions identified by Hydrosphere Consulting to address the 26 IWCM Issues are outlined below.

- *Ongoing reduction of water use*
- *Climate change adaptation planning*
- *Enhancing approaches to community engagement and data collection*
- *Achieving 'best-practice' in water cycle management*
- *Increasing the use of treated wastewater and covered in Issue 19, which reads:*
- *Council and the community have a desire for increased water recycling but there are significant barriers to implementation of recycled water schemes within the Tweed Shire*
- *Implementing a total water cycle management framework and preparation of sub-catchment management plans*

- *Improving regulation of on-site sewerage systems*
- *Improving environmental monitoring, evaluation and reporting*
- *Improving management of drinking water catchments*
- *Ongoing development and implementation of a water sensitive urban design framework*
- *Improving management of sewer overflows*
- *A review of bio-solids management approaches*

The Byrrell Creek Landcare Group's comments on points within the draft IWCM are below:

Administration & Governance

1. IWCM principles, responsibilities & priorities are not fully implemented across all Council units

This is a key issue. How is this being achieved? It is noted that this is only a long term goal. The Departments of Engineering, Planning & Regulation and Community & Resources would need to be actively involved with the Councils Water Unit, especially with new development approvals and design.

2. There is a need for informed and transparent decision-making and better management of community expectations

It has been good to see more effort in providing opportunities for community feedback, especially through all levels of the process (2a, 2b & 2c)- whether the community's ideas and recommendations are actually implemented by Council is another case.

3. A need for defensible & Robust population Forecasts

As the debate on Tweeds Water Issues rests on accurate figures for both population and water use, data collection & an Independent Review of Population forecasts is a necessity.

It is noted that DMS calculations have been revised. (Figure 5 Page 7)

Ongoing "Independent" data reviews of long term growth trends are vital, as growth may remain at 1.3% (2006-2011 levels)

ID Consulting has provided revised population forecasts which have lowered population estimates in the DMS for 2031: 143,488 residents (DMS): to 128,135 residents (ID Consulting): This equates 10.7% reduction in population.

With reduced population & steadily falling water consumption a later time frame for water augmentation will be achieved, which has now been acknowledged within the Draft IWCM.

4. Uncertainty regarding the preferred Tweed district water supply augmentation option

We welcome the recommendations for "community engagement" through level 1,2, & 3: Having been involved in the CWG Committee in 2010/2011 and finding the consultation began too late in the process, and that our recommendations and those of the community were ignored by Council. After examining the Draft IWCM, besides more stringent DMS, the Councils choice for Augmentation is still ultimately based on dams.

A more integrated and holistic view is incorporating a combination of possible options such as stormwater capture and recycled water, rain water tanks and also a more detailed assessment of significant Tweed Coastal sands groundwater supply.

The "Brief Technical Review of Tweed Water Supply" by Geolink & "Toward a Water Sensitive Future": QLD Govt Dept of Environment & Natural Resource Management both suggest that the future is in diversifying water supply.

Rous Water released its "Draft Future Water Strategy" in February this year and have also chosen to look at multiple options: *"These investigations have shown the proposed Dunoon Dam to be technically viable, however cultural heritage and ecological constraints were identified, combined with the high capital costs associated with constructing a large dam, have made Dunoon Dam less preferable to the groundwater and water re-use options. Therefore, the Future Water Strategy has identified and prioritised other water sources ahead of the Dunoon Dam proposal."*

We point out that both Clarrie Hall and the proposed Byrill Creek Dam site have important cultural Heritage sites, are both high conservation value and construction costs, especially Byrill Creek the latter now estimated at approx \$75 mill and by 2030?.

6. Asset Management Planning

The major investment (and debt) of major infrastructure-\$75 million dollars in the new Bray Park Water Treatment Plant, distanced from the growing Tweed coastal population and the Banora Point STP, at a cost of \$36 million, which has recently been upgraded, have created a situation that leaves little funding or incentives for a more holistic integrated approach in water management. Banora STP, with its close proximity to high growth areas and new Developments could have been built with the extra filtration processes to produce recycled water for dual reticulation. West Kingscliff STP could also be upgraded to service Kings Forest & West Kingscliff with dual reticulation too.

7. Climate Change Implications need to be integrated into planning.

Climate Change is a reality, with sea level rise a real threat to newly developed low lying coastal areas such as Salt, Casurina, & Terranora and older areas of Kingscliff, Bogangar & Tweed. Increased flooding along major rivers & estuaries will also need long term planning and adaption. The question is should land be developed in these areas at all? It is noted that nil action is required by Council in level 3 ,Mid to long term planning. Surely this should be ongoing?

9. Best-Practice Compliance

While Council currently substantially complies with the NSW government best-practice requirements, We would point out that in many other areas the council is not complying:

i) National Water Initiative and Best-Practice Management IWCM(Page 33)

The NWI provides objectives, outcomes and agreed actions to be undertaken by state and local governments across all aspects of water management. TSC is required to demonstrate compliance with the NWI by encouraging best-practice through effective, efficient and sustainable water supply and wastewater businesses.

We do not see Council actions on this sustainable level :-

- so far there has been no harvesting of bulk stormwater or reuse demonstrated;
- Nor reused 'grey-water' already on urban sites;
- Nor plans to reused reclaimed water at new green-field sites for external irrigation and
- Nor has Council maintained water quality objectives for our waterways such as at Cobaki and Terranora Broadwaters.

While it is understood that NSW Planning has approved some of these 'Greenfield' sites without WSUD Design,or water saving policies, we suspect that NSW Planning would not have done so unless they had the direct approval of Tweed Shire Council planners, which was the case with the JRPP Panel Approval of Cobaki, who opted for only BASIX requirements.

ii) The Far North Coast Regional Strategy Plan 2006: Page 40 10 Water & Energy Resources: Actions "All future development is to apply water sensitive urban design principles including the use

of dual reticulation systems in releases of adequate scale and meet storm water management targets that support the environmental values of the catchment”

iii) The State Government Weirs Policy does not support new or expanded dams.

The NSW Weirs Policy states:

An increase in town water supply for the purposes of meeting projected population demand cannot be used as a justification to approve a proposal to build a new, or expand an existing weir, if environmentally friendlier alternatives to meeting that demand exist which are also economically feasible. (Approvals for New or Expanded Weirs - Page 3).

As the Council's long term goal for water supply is to either build a new dam at Byrill Creek or extend Clarrie Hall this is not compliant and indicates a need to actively explore other water supply alternatives to dams.

iv) Of course there is also the NSW Tweed Alluvial Water Sharing Plan 2010 that prohibits the building of Byrill creek dam

11. There is currently no mechanism to promote retrofit of rain water tanks or installation of large rainwater tanks in new development.

It is noted that the recommendation at present is to remain at status quo of the DMS-no action, which is disappointing, although plans to explore options in the future. If it's left too long the new developments will be approved with no substantial water saving whatsoever! Too little & too late, like the recycled water saga.

Community feedback obtained during the IWCM review showed that 93% supported the use of household rainwater tanks as a water saving measure for external & internal use.

Our group supports a council incentive scheme to install tanks much larger than required by BASIX and to retrofit existing properties

A minimum capacity 10,000lt tank should be MANDATED in Tweed Council Large development DA Approvals, which was the case in SE QLD but a 5,000lt), not a voluntary agreement/recommendation as proposed by Tweed Council. This is particularly important in the new Greenfield developments. Either underground tanks or larger bulk shared community rain water tanks could also utilised if space is an issue.

However, if it is a choice between either tanks or recycled water, rather than both being implemented together which is preferable, we would choose implementing Recycled dual reticulation in new developments. Tanks can be retro-fitted later to existing dwellings.

Rebates such as those provided in SE QLD and by Rous Water, Lismore/Ballina should be considered to promote water savings. As part of the Queensland Government's Water-Wise Rebate Scheme rainwater tanks were installed in 236, 000 homes in SEQ and Tweed Shire Council only installed 117 tanks.

13. Augmentation of the Tweed District Water Supply will be required in future due to population growth although the timing and additional supply required are unclear.

Please refer back to previous Comments on Point 3 and 4.

We recognise that the need for any supply augmentation in approx 2030 will depend on the long term success of the demand measures (congratulations on the 180lt per day target achievement)as well as the future population growth and future secure yield of water supplies., but the below statement on (Page 66) needs examining-

“However, it is apparent that demand management options (including potable water substitution such as rainwater tanks or recycled water) will not be sufficient to offset the need for a new supply source.”

A combination of water saving, such as in the DMS Scenario 3 indicates that consumption drops to 93 L/person /per day. Dual reticulation recycled water could be used for outdoor garden use & toilets which accounts for approximately 30-40% of a household use. Rainwater tanks could be used for

Washing machines & showers which accounts for another 40-50%. The remaining approx 20% for kitchen use & taps would come from the council water mains.

With such foresight & implementation by council it is quite possible that it may be sufficient.

14. Drinking Water Catchment Quality

The total Management Catchment Plan which is envisaged within the Draft IWCM is very positive.

Management Plans should include fencing stock from the perimeter of Clarrie Hall Dam and on the banks of all waterways that feed into the Tweed River. Council could set an example by fencing cows out of the creek on their Byrill Creek property! Use of herbicides on and close to waterways should not be permitted.

Byrill Creek Landcare notes that dividends from council's water supply and wastewater businesses are used to fund river and stream bank protection works. As a land care group we consider this should be an ongoing policy to improve water quality within the catchment.

19: Council and the community have a desire for increased water recycling but there are significant barriers to implementation of recycled water schemes within the Tweed Shire

Throughout the IWCMS 2006 the aims and objectives state innumerable times the necessity for Integrated solutions: Water Sensitive Urban Design, Stormwater detention/capture, reducing nutrient discharge into rivers & estuaries, encouraging Environmentally Sensitive Development, reuse of water and dual reticulation in new developments.

Eg Summary iii, iv, & v :Urban Waste Water Actions, General Urban Actions 3., 11, 13, & 14, 18 & 20
5.3.1 Page 69 Preliminary Strategy 3., 11, 13, & 14, 18 & 20.

5.2.1 Page 68 Options for Integration; 1:High Quality Effluent Reuse, 4: Decentralised Sewerage,5: Stormwater reuse, 6:Water Sensitive Urban Design

2006 IWCM Page 68 Quote *"It is likely that a range of integrated solutions will need to be adopted across the catchment in order to achieve a sustainable urban water cycle. Sustainability is unlikely to be achieved through the adoption of just one or two key integrated solutions or strategies."*

This is 8 years ago! and we highlight Tweed Shire Council's inability to finalise any new potable water saving proposal with large 'greenfield' developers at Bilambil Heights, Cobaki Lakes, Kings Forest and Terranora E.

As a member of the CWG, who has addressed the Council on numerous occasions over the last 5 years (& various NSW government departments) in relationship to implementing the use of recycled water, the Council staff have shown no desire whatsoever to support the use of Recycled water, be it dual reticulation, storm water harvesting, on site reuse projects or large recycle systems connected to STPs to cope with the New Greenfield developments.

In 2011 Experts in their field were brought in to address Council, to help open eyes & minds to possibilities available- .Professionals who could demonstrate working projects : such as Dr Andrzej Listowski, the Manager and creator of Water and Energy of SOPA, Sydney Olympic Park, Amanda Otto from the Pimpama/Coomera Project, and engineers, Craig Zerk & Duncan Thomson from Geolink, who presented information on Orange Councils stormwater harvesting, Ballina council's recycled water plans and new innovative stormwater & rainwater bulk capture in two Brisbane urban developments.Requests for a Council follow up meeting with NRG & CEC members on how some of these ideas could be implemented in new developments was refused by council staff.

71% of Water use is consumed by residential rather than commercial use within Tweed Shire (DMS Exec Summary Figure E1) The target should be to ensure new residential developments, with a projected population of approx 40,000, incorporate major water saving.

A lack of vision and decisive action on councils part has allowed 2 of our biggest new developments, Cobaki and Kings Forest (10,000 new homes) through the DA process without stipulating dual reticulation as a requirement for approval. Council's decision means that some 40,000 new residents who will reside in the new greenfield areas by 2041 will continue their wastage of costly potable drinking for outside irrigation, washing cars and toilets.

We emphasise that in the community survey online 45% preferred to see Council funding allocated to the greater use of recycled water.

With the current Council direction and policy relating to recycled water use, the initiative to implement recycling is left to the developer which provides no incentive for recycling. Council needs to stipulate that it is a requirement for DA Approval. Council may be limited in its ability to influence residential developments that are already approved at state government level, but not yet constructed, however pipe infrastructure for dual reticulation could be laid for the future.

Council may be limited in its ability to influence residential developments that are already approved at state government level, but not yet constructed, however pipe infrastructure for dual reticulation could be laid for the future.

Council should consider future policy development in this area and opportunities for increased water recycling as an integral part of Council's servicing strategy for all future developments. The charts in the IWCM Page 75-77 indicate that of the 15 potential new developments in Tweed Shire, just 1 has a proposed on site recycled water plant on the cards. It is noted that West Kingscliff STP will need upgrading and surely this is the time to provide recycled water to Kings Forest & to the upcoming West Kingscliff development .

As the Geolink Review of Feb 2011 pointed out to Council "*It would be prudent to require the design of the subdivision to include dual reticulation: key portions of the dual reticulation infrastructure should be installed at the development stage because it will be much cheaper than retrofitting at a later date.*"

It is interesting to note that "the *barriers to implementation*" nor the "*Increasing regulations, treatment requirements and cost associated with use of recycled water*", have not stopped adjoining shires implementing recycled water- (Ballina, Rous Water, Pimpama nor the massive Sydney Water projects)

Council has repeatedly proclaimed that Dual Reticulation is too expensive to consider. We ask how can the community weigh up the costs when NO updated definitive figures have been provided to illustrate the cost? This should be provided by an accredited independent authority.

The IWCM has identified that water conservation and river health are important to the community, so why not utilise recycled water which will reduce nutrient load to our rivers by at least 10% and create a more healthy riverine environment at the same time?"

21,22 and 23 Urban Stormwater Management:

We emphasise that in the community survey 82% by phone & 73% online considered the health & cleanliness of Tweed River to be important.

Due to the legacy of existing traditional storm water management many of our rivers receive too much pollutant load, which is more difficult to retro fit. This indicates a pressing need to implement appropriate WSUD principles in all new planned expansion areas.

For many years the Tweed Community has been lodging complaints about stormwater pollution from the Cobaki development earthworks draining into sensitive SEPP 14 Wetlands/Cobaki Broadwater, without any remedy by Council. Kings Forest Development will impact on the Cudgen Creek and Lake areas. Stricter regulation for subdivision earth works needs to be implemented and a way of monitoring and enforcing those regulations, particularly acid sulphate soil areas.

The question is why would The Draft Urban Stormwater Quality Management Plan (Australian Wetlands, 2011) which has a strong emphasis on achieving water quality objectives for downstream waterways be any more effective than the 'failed' 'D7' Stormwater Quality Management Plan?

Water Sensitive Urban Design (WSUD) and Environmentally Sensitive Development (ESD) is a key to more sustainable developments. The planning approval Department in Council needs to actively promote and ensure during DA approvals that WSUD principles are designed into new developments. In developments over the last 10 years this has not been the case: eg concrete gutters instead of the swales. Stormwater runoff could be integrated with Storm water capture ponds or wetlands for reuse, at the same time providing recreational open space with gardens and lakes, rather than run off into our rivers.

It is hoped that by identifying (through the IWCMS) the need for education and integration between different departments within the Council, and with appropriate guidelines from the draft *Tweed Urban Stormwater Quality Management Plan and Water By Design program for the SE QLD Health Waterways Partnership*, can move forward towards a more sustainable framework. This should be an ongoing action through level 2, not in the future

.Every year, Sydney Olympic Park Authority is collecting, storing, treating and reusing approximately 700 million litres of stormwater, providing and enhancing fauna and flora habitat areas of the 425ha of the Parklands and irrigating the urban areas of Sydney Olympic Park.

24: There is a need for a holistic catchment management strategy for the Shire

A frame work for coordinating catchment management activities across the Shire is a necessity. A broader plan including upstream catchment areas as well as estuaries needs to be implemented. If a total catchment approach to water cycle management is desired, there is a definite need to strengthen the linkages between existing catchment management, plans for estuary management, agricultural management and IWCM programs and activities.

Funding, such as through the River Health Grants are an excellent way to implement stabilisation and erosion control along our water ways. The Byrrell Creek Landcare Group is one of the recipients of this grant, which will help towards a cleaner creek and a more diverse riparian area. We believe that funding for tree revegetation along water ways, rather than over use of chemicals is a more holistic and sustainable approach. We have already found through our restoration work, that it is a great educational tool for the community.

We would appreciate an acknowledgement that you have received this submission.

Yours Sincerely,

Joanna Gardner..... on behalf of the Byrrell Creek Landcare Group

Coordinator
Byrrell Creek Landcare Group
PO Box 3322 Uki NSW 2484
Phone: 02 66797039



The General Manager
Tweed Shire Council
Murwillumbah 2484

20th March 2014

**Re: Final Draft Integrated Water Cycle Management (IWCM) Strategy 2014 -
Tweed Shire Council**

Dear Sir,

On behalf of the 500 members of Northern Rivers Guardians, I would like to make the following submission to the above strategy:

Northern Rivers Guardians supports the revegetation of riparian areas in the Upper Tweed catchment, and all projects which work to maintain healthy water ways and we place a primary value on sustainable solutions to water management.

We emphatically do not support the proposed dam at Byrrill Creek due to the associated environmental destruction to one of the highest priority riparian conservation areas in the Tweed.

Northern Rivers Guardians acknowledge that Hydrosphere has collated & overviewed a large portion of Tweed Council water related issues and proposed actions that could be implemented by Council. We feel that some of the priorities and timelines for those actions could be adjusted and we feel there primarily needs to be a concerted effort to ensure new developments are partially or ideally fully water self sufficient and meet WSUD principles, which is not the case in the Draft IWCM.

The proposed 60 IWCM Actions identified by Hydrosphere Consulting to address the 26 IWCM Issues are outlined below.

- *Ongoing reduction of water use*
- *Climate change adaptation planning*
- *Enhancing approaches to community engagement and data collection*
- *Achieving 'best-practice' in water cycle management*
- *Increasing the use of treated wastewater and covered in Issue 19, which reads:*
- *Council and the community have a desire for increased water recycling but there are significant barriers to implementation of recycled water schemes within the Tweed Shire*
- *Implementing a total water cycle management framework and preparation of sub-catchment management plans*
- *Improving regulation of on-site sewerage systems*
- *Improving environmental monitoring, evaluation and reporting*

- *Improving management of drinking water catchments*
- *Ongoing development and implementation of a water sensitive urban design framework*
- *Improving management of sewer overflows*
- *A review of bio-solids management approaches*

Northern Rivers Guardians comments on points within the draft IWCM are as follows :

Administration & Governance

- **IWCM principles, responsibilities & priorities are not fully implemented across all Council units**

This is a key issue. How is this to be achieved? It is noted that this is only a long term goal.

The Departments of Engineering, Planning & Regulation and Community & Resources would need to be actively involved with the Councils Water Unit, especially with new development approvals and design.

- **There is a need for informed and transparent decision-making and better management of community expectations**

It has been good to see more direction and effort in providing opportunities for community feedback, especially through all levels of the process- whether the community's ideas and recommendations are actually adopted or given equitable status by Council remains to be demonstrated.

- **A need for Defendable & Robust Population Forecasts**

As the debate on Tweed's Water Issues rests on accurate figures for both population and water use, data collection & an Independent Review of Population forecasts is a necessity.

It is noted that DMS calculations have been revised. (Figure 5 Page 7)

Ongoing "Independent" data reviews of long term growth trends are vital, as growth may remain at 1.3% (2006-2011 levels)

ID Consulting has provided revised population forecasts which have lowered population estimates in the DMS for 2031: 143,488 residents (DMS): to 128,135 residents (ID Consulting): This equates 10.7% reduction in population.

With reduced population & steadily falling water consumption a later time frame for water augmentation will be achieved, which has now been acknowledged within the Draft IWCM.

- **Uncertainty regarding the preferred Tweed district water supply augmentation option**

We welcome the recommendations for "community engagement" through level 1,2, & 3. but note with concern that from the Draft IWCM, besides more stringent DMS, the Council's choice for Augmentation is still ultimately based on dams. Our membership is of the opinion that a more sustainable, integrated and holistic approach is to prioritise a combination of more affordable options such as stormwater capture & wetlands collection, recycled water, rain water tanks and also a more detailed assessment of significant Tweed Coastal sands groundwater supply. NRG would also like to see far more incentives from Council for domestic and commercial rain water tanks with tanks mandated for all new domestic, commercial & industrial, and housing estate developments.

The “ Brief Technical Review of Tweed Water Supply” by Geolink & “Toward a Water Sensitive Future”: QLD Govt Dept of Environment & Natural Resource Management both suggest that the future is in diversifying water supply. Rous Water released its “Draft Future Water Strategy” in February this year and have also chosen to look at multiple options: *“These investigations have shown the proposed Dunoon Dam to be technically viable, however cultural heritage and ecological constraints were identified, combined with the high capital costs associated with constructing a large dam, have made Dunoon Dam less preferable to the groundwater and water re-use options. Therefore, the Future Water Strategy has identified and prioritised other water sources ahead of the Dunoon Dam proposal.”*

We point out that both Clarrie Hall and the proposed Byrill Creek Dam site have important cultural Heritage sites, are both high conservation value and construction costs, especially Byrill Creek the latter now estimated at approx \$75 million – a cost which would be significantly greater by 2030?.

- **Asset Management Planning**

The major investment (and debt) of major infrastructure – the \$75 million dollars in the new Bray Park Water Treatment Plant, distanced from the growing Tweed coastal population and the Banora Point STP, at a cost of \$36 million, which has recently been upgraded have created a situation that leaves little funding or incentives for a more rational holistic integrated approach in water management. Banora STP, with its close proximity to high growth areas and new developments could have been built with the extra filtration processes to produce recycled water for dual reticulation. West Kingscliff STP could also be upgraded to service Kings Forest & West Kingscliff with dual reticulation too.

- **Climate Change Implications need to be integrated into planning.**

Climate Change is a reality, with both sea level rise a real threat to newly developed low lying coastal areas such as Salt, Casurina, & Terranora and older areas of Kingscliff, Bogangar & Tweed and dramatic changes in weather patterns and weather intensity. We know from the science that we can expect increased flooding along major rivers & estuaries will most definitely need open, science based analysis as the foundation for all long term planning and adaption strategies. A major question - one that faces local councils & governments across Australia and the world, is whether land be developed in areas which have an increased chance of flooding at all. It is noted that nil action is required by Council in level 3 Mid to long term planning. Surely under the circumstances, this should be ongoing?

9. Best-Practice Compliance

While Council currently substantially complies with the NSW government best-practice requirements, We would point out that in many other areas the council is not compliant:

i) National Water Initiative and Best-Practice Management IWCM(Page 33)

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- Nor has Council maintained water quality objectives for Cobaki and Terranora Broadwaters.

While it is understood that NSW Planning has approved some of these 'greenfield' sites without WSUD Design, or water saving policies, we suspect that NSW Planning would not have done so unless they had the direct approval of Tweed Shire Council planners, which was the case with the JRPP Panel Approval of Cobaki, who opted for only BASIX requirements.

ii) The Far North Coast Regional Strategy Plan 2006: Page 40 10 Water & Energy Resources: Actions "*All future development is to apply water sensitive urban design principles including the use of dual reticulation systems in releases of adequate scale and meet storm water management targets that support the environmental values of the catchment*"

iii) The State Government Weirs Policy does not support new or expanded dams. The NSW Weirs Policy states:

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As the Council's long term goal for water supply is to either build a new dam at Byrrill Creek or extend Clarrie Hall this is not compliant and indicates a need to actively explore other water supply alternatives to dams.

iv) Of course there is also the NSW Tweed Alluvial Water Sharing Plan 2010 that prohibits the building of Byrrill creek dam

11. There is currently no mechanism to promote retrofit of rain water tanks or installation of large rainwater tanks in new development.

It is noted that the recommendation at present is to remain at status quo of the DMS- no action, which is disappointing, although plans to explore options in the future. If it's left too long the new developments will be approved with no substantial water saving whatsoever! Too little & too late like the recycled water saga.

Community feedback obtained during the IWCM review showed that 93% supported the use of household rainwater tanks as a water saving measure for external & internal use.

Our group supports a council incentive scheme to install tanks much larger than required by BASIX or to retrofit existing properties

A minimum capacity 10,000lt tank should be mandated in Tweed Council DA Approvals, as in SE QLD (5,000lt), not a voluntary agreement/recommendation as proposed by Tweed Council. This is particularly important in the new Greenfield developments. Either underground tanks or larger bulk shared community rain water tanks could also utilised if space is an issue.

However, if it is a choice between either tanks or recycled water, rather than both being implemented together, we would choose implementing Recycled dual reticulation in new developments. Tanks can be retro-fitted later to existing dwellings. Rebates such as those provided in SE QLD and by Rous Water, Lismore/Ballina

should be considered to promote water savings. As part of the Queensland Government's Water-Wise Rebate Scheme rainwater tanks were installed in 236, 000 homes in SEQ and Tweed Shire Council only installed 117 tanks.

13. Augmentation of the Tweed District Water Supply will be required in future due to population growth although the timing and additional supply required are unclear.

Please refer back to previous Comments on Point 3 and 4.

We recognise that the need for any supply augmentation in approx 2030 will depend on the long term

success of the demand measures (congratulations on the 180lt per day target achievement) as well as the future population growth and future secure yield of water supplies., but the below statement on (Page 66) needs examining-

"However, it is apparent that demand management options (including potable water substitution such as rainwater tanks or recycled water) will not be sufficient to offset the need for a new supply source."

A combination of water saving, such as in the DMS Scenario 3 indicates that consumption drops to 93 L/person /per day. Dual reticulation recycled water could be used for outdoor garden use & toilets which accounts for approximately 30-40% of a household use. Rainwater tanks could be used for Washing machines & showers which accounts for another 40-50%. The remaining approx 20% for kitchen use & taps would come from the council water mains.

With such foresight & implementation by council it is quite possible that it may be sufficient.

14. Drinking Water Catchment Quality

The total Management Catchment Plan which is envisaged within the Draft IWCM is very positive.

Management Plans should include fencing stock from the perimeter of Clarrie Hall Dam and on the banks of all waterways that feed into the Tweed River. Use of herbicides on and close to waterways should not be permitted.

19: Council and the community have a desire for increased water recycling but there are significant barriers to implementation of recycled water schemes within the Tweed Shire

Throughout the IWCMS 2006 the aims and objectives state innumerable times the necessity for Integrated solutions: Water Sensitive Urban Design, Stormwater detention/capture, reducing nutrient discharge into rivers & estuaries, encouraging Environmentally Sensitive Development, reuse of water and dual reticulation in new developments.

Eg Summary iii, iv, & v :Urban Waste Water Actions, General Urban Actions 3., 11, 13, & 14, 18 & 20

5.3.1 Page 69 Preliminary Strategy 3., 11, 13, & 14, 18 & 20.

5.2.1 Page 68 Options for Integration; 1:High Quality Effluent Reuse, 4:

Decentralised Sewerage,5: Stormwater reuse, 6:Water Sensitive Urban Design

2006 IWCM Page 68 Quote *"It is likely that a range of integrated solutions will need to be adopted across the catchment in order to achieve a sustainable urban water cycle. Sustainability is unlikely to be achieved through the adoption of just one or two key integrated solutions or strategies."*

This is 8 years ago! and we highlight Tweed Shire Council's inability to finalise any new potable water saving proposal with large 'greenfield' developers at Bilambil Heights, Cobaki Lakes, Kings Forest and Terranora E.

Council staff have shown no desire whatsoever to support the use of Recycled water, be it dual reticulation, storm water harvesting, on site reuse projects or large recycle systems connected to STPs to cope with the New Greenfield developments.

In 2011, at our own expenses, NRG in conjunction with Byrill Creek Landcare and the Caldera Environment Centre brought in experts in their field to address Council & the public to help open eyes & minds to cutting edge possibilities available – These were professionals who could demonstrate working projects : such as Dr Andrzej Listowski, the Manager and creator of Water and Energy of SOPA, Sydney Olympic Park, Amanda Otto from the Pimpama/Coomera Project, and engineers, Craig Zerk & Duncan Thomson from Geolink, who presented information on Orange Councils stormwater harvesting, Ballina council's recycled water plans and new innovative stormwater & rainwater bulk capture in two Brisbane urban developments. Requests for a Council follow up meeting with NRG & CEC committee members on how some of these ideas could be implemented in new developments was disappointingly refused by council staff.

71% of Water use is consumed by residential rather than commercial use within Tweed Shire (DMS Exec Summary Figure E1) The target should be to ensure new residential developments, with a projected population of approx 40,000, incorporate major water saving.

A lack of vision and decisive action on councils part has allowed 2 of our biggest new developments, Cobaki and Kings Forest (10,000 new homes) through the DA process without stipulating dual reticulation as a requirement for approval. Council's decision means that some 40,000 new residents who will reside in the new greenfield areas by 2041 will continue their wastage of costly potable drinking for outside irrigation, washing cars and toilets.

With the current Council direction and policy relating to recycled water use, the initiative to implement recycling is left to the developer which provides no incentive for recycling. Council needs to stipulate that it is a requirement for DA Approval. Council may be limited in its ability to influence residential developments that are already approved at state government level, but not yet constructed, however pipe infrastructure for dual reticulation could be laid for the future.

Council should consider future policy development in this area and opportunities for increased water recycling as an integral part of Council's servicing strategy for all future developments.

The charts in the IWCM Page 75-77 indicate that of the 15 potential new developments in Tweed Shire, just 1 has a proposed on site recycled water plant on the cards. It is noted that West Kingscliff STP will need upgrading and surely this is the time to provide recycled water to Kings Forest & to the upcoming West Kingscliff development .

As the Geolink Review of Feb 2011 pointed out to Council *"It would be prudent to require the design of the subdivision to include dual reticulation: key portions of the dual reticulation infrastructure should be installed at the development stage because it will be much cheaper than retrofitting at a later date."*

It is interesting to note that "barriers to implementation" nor the "Increasing regulations, treatment requirements and cost associated with use of recycled water",

have not stopped adjoining shires implementing recycled water- (Ballina, Rous Water, Pimpama nor the massive Sydney Water projects)

Council has repeatedly proclaimed that Dual Reticulation is too expensive to consider. We ask how can the community weigh up the costs when NO updated definitive figures have been provided to illustrate the cost? This should be provided by an accredited independent authority.

The IWCM has identified that water conservation and river health are important to the community, so why not utilise recycled water which will reduce nutrient load to our rivers by at least 10% and create a more healthy riverine environment at the same time?"

21,22 and 23 Urban Stormwater Management:

For many years the Tweed Community has been lodging complaints about stormwater pollution from the Cobaki development earthworks draining into sensitive SEPP 14 Wetlands/Cobaki Broadwater, without any remedy by Council. Kings Forest Development will impact on the Cudgen Creek and Lake areas. Stricter regulation for subdivision earth works needs to be implemented and a way of enforcing those regulations

Water Sensitive Urban Design (WSUD) and Environmentally Sensitive Development (ESD) is a key to more sustainable developments. The planning approval Department in Council needs to actively promote and ensure during DA approvals that WSUD principles are designed into new developments. Over the last 10 years within developments this has not been the case: eg concrete gutters instead of the swales. Stormwater runoff could be integrated with Storm water capture ponds or wetlands for reuse, at the same time providing recreational open space with gardens and lakes, rather than run off into our rivers.

It is hoped that by identifying the need for education and integration between different departments within the IWCMS that Council, with guidelines from the draft *Tweed Urban Stormwater Quality Management Plan and Water By Design* program for the South East Queensland Health Waterways Partnership, can move forward towards a more sustainable framework.

.Every year, Sydney Olympic Park Authority is collecting, storing, treating and reusing approximately 700 million litres of stormwater, providing and enhancing fauna and flora habitat areas of the 425ha of the Parklands and irrigating the urban areas of Sydney Olympic Park.

24: There is a need for a holistic catchment management strategy for the Shire

From IWCM

There is currently no framework for coordinating catchment management activities across the Shire. Existing estuary management plans and coastal zone management plans for estuaries have been developed through the state government's planning process. While the more recently updated plans have acknowledged the upstream catchment areas as affecting the health of estuaries, the main focus is on the health of the estuarine reaches. If a total catchment approach to water cycle management is desired, there is a need to strengthen the linkages between biodiversity

assessment & protection, existing catchment management, plans for estuary management, agricultural management and IWCM programs and activities.

In conclusion, Northern Rivers Guardians request that Council place the highest possible value on maintaining the internationally significant biodiversity of the area and prioritise the adoption of best practice sustainable water management within the context of all points mentioned and particularly in pro active recognition of the predicted effects of climate change.

Yours sincerely,

Barbara Tyler
Secretary
Northern Rivers Guardians Inc



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19 March 2014

The General Manager
Tweed Shire Council
PO Box 816
Murwillumbah
NSW 2484

Dear Sir,

Re: Final Draft Integrated Water Cycle Management (IWCM) Strategy 2014 - Tweed Shire Council

Tweed Heads Environment Group Inc. wishes to make the following submission in regards to the above matter.

Background

Tweed Shire Council Final Draft Strategy 2014 advises:

In 2012, a major independent six-year review of the IWCM Strategy commenced.

This was to ensure the Strategy:

- Remained relevant to the current or emerging challenges facing Council
- Continued to reflect community desires for future water cycle management
- Adhered to the updated guidelines established by the NSW Office of Water (NOW)
- Provided input into Council's broader Environmental Sustainability Strategy (ESS), which is likely to be delivered in 2015
- Incorporated *catchment management* into IWCM planning, extending traditional focus of the NOW on urban water supply, wastewater and stormwater management, as shown in *Figure 1*. This is possible as the entire Tweed water supply catchment falls within the boundary of the Tweed local government area.

IWCM Objectives

The Tweed community and Council have expressed a desire for an IWCM approach that is broader than the original urban water focus.

This recognises that all elements of the water cycle are interdependent and all aspects of land use and infrastructure planning should be integrated with the water cycle considerations.

The key considerations for implementation of a broader water cycle approach are:

- Implementation of a Total Water Cycle Management (TWCM) approach through better integration of urban water supply, wastewater, stormwater and catchment management activities;
- Identification and incorporation of community priorities;
- Provision of mechanisms for integration between the activities of the Council units that have relevance to water cycle management; and
- Compliance with the NSW Office of Water best-practice guidelines (DWE, 2007).

The Tweed Shire Council Final Draft Strategy 60 IWCM Actions

The proposed 60 IWCM Actions identified by Hydrosphere Consulting to address the 26 IWCM Issues are outlined below. Broadly speaking, they relate to:

- Ongoing reduction of water use
- Climate change adaptation planning
- Enhancing approaches to community engagement and data collection
- Achieving 'best-practice' in water cycle management
- Increasing the use of treated wastewater and covered in Issue 19, which reads:
Council and the community have a desire for increased water recycling but there are significant barriers to implementation of recycled water schemes within the Tweed Shire

- Implementing a total water cycle management framework and preparation of sub-catchment management plans
- Improving regulation of on-site sewerage systems
- Improving environmental monitoring, evaluation and reporting
- Improving management of drinking water catchments
- Ongoing development and implementation of a water sensitive urban design framework
- Improving management of sewer overflows
- A review of bio-solids management approaches

Our Submission

Tweed Heads Environment Group Inc. wishes to make the following submission on several of the twenty six IWCM Issues presented in this draft:

3.5.1 Administration and Governance

Issue 4: Uncertainty regarding the preferred Tweed district water supply augmentation option creates confusion regarding land use planning

Council has been progressively purchasing land to cater for the inundation areas (and buffer zones) of the proposed Byrrill Creek Dam and potential raising of Clarrie Hall Dam.

The absence of a firm direction regarding the future water supply is likely to cause anxiety amongst affected land holders as well as difficulties implementing land use planning and development controls.

Feedback from Community Groups and Community Members included the following:

Uncertainty regarding the preferred Tweed district water supply augmentation option creates confusion regarding land use planning

Tweed Shire Council proposed action

2c – Community engagement covering the full water cycle: 2b is also a key component of this level but would encompass a greater range of topics and issues.

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 100)

Our Comment

Tweed Heads Environment Group Inc. notes that in the recent IWCM consultation process, our community made the following recommendations:

- Council should implement a balanced approach to reducing water usage and increasing water availability. However there is significant support for continuation of demand management initiatives;
- A continuous supply of drinking water is a priority but also important to the community are maximising stormwater and reclaimed water re-use, Use of tank water and grey-water systems, assessment of significant Tweed Coastal sands groundwater supply, maintaining the natural environment in river and catchment areas and encouraging households to reduce their water consumption;
- Maintaining clean water in the Tweed River system and the Clarrie Hall Dam is a high priority.

Tweed Heads Environment Group Inc. also notes that the consultant has not made reference to a previous public consultation in 2009 on Tweed Shire's Water Augmentation.

The concerns of the Tweed Community Working Group (CWG), who requested a more sustainable water solution to Tweed Shire's Water Augmentation, were ignored by both the Council water staff and councillors in 2009.

As Council staff might recall, members of the CWG and our community requested that Council seek an expert Independent Review from a reputable institution like the Institute for Sustainable Futures, University of Technology Sydney or the CSIRO and not just only another water consultancy.

The purpose of the Independent expert report was to review the Option selection process; water demand management projections; projected population growth; and the impacts of climate change scenarios for Tweed Shire's future drinking water supply.

Our request to Council followed Water Tweed Shire Council advice to CWG Members in December 2009, that: “an expert review of the entire process and EIS recommendations will be carried out by an independent consultant to give Council further certainty before applying for development approval.”.

In this instance that community consultation is still being ignored. Our group considers that there is the equal responsibility of Council to take notice and respond to community requests.

Recommendation: The confusion on land use planning could be obviated by resolving our community request about Tweed Shire’s Water Augmentation.

Issue 7: Climate change implications need to be integrated into planning for urban water services, catchment management and natural resource management

Future sea level rise and climate variations will affect water cycle management infrastructure and activities. This impact needs to be considered in future water supply and wastewater planning, demand management and risk management.

Feedback from Community Groups and Community Members included the following:

Climate change implications need to be integrated into planning for urban water services, catchment management and natural resource management

Tweed Shire Council proposed action

No additional options identified as part of a total water cycle management approach

These considerations will be included in the IWCM Review and further investigation will be recommended if required.

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 101), (Page 132)

Our Comment

Tweed Heads Environment Group Inc. refers to our above comment on page 2 regarding climate change and the following concerns:

‘The purpose of the Independent expert report was to review the Option selection process; water demand management projections; projected population growth; and the impacts of climate change scenarios for Tweed Shire’s future drinking water supply.’

The World Bank said a planet that is 4C warmer would see coastal areas inundated and small islands washed away, food production slashed, species eradicated, more frequent heat waves and high-intensity cyclones, and diseases spread to new areas.

Experts said pledges to mitigate greenhouse gases are not enough to limit warming to the UN goal of 2C above pre-industrial levels.” (Echonetdaily - 27.2.2012).

Other climate predictors indicate that a 3.5 degree (4.2 degree – pre industrial) Celsius is likely by 2040.

<http://www.youtube.com/watch?v=RInrvSjW90U>

Such an increased change in climate would place considerable Tweed Shire water reclamation and drinking water infrastructure at risk without any climate change recovery plan.

Our concern about the effects of climate change is increased when it is understood that the NSW government was planning to have a ‘No policy Benchmark’ on NSW tidal increase caused by future climate change.

The absence of a NSW government policy Benchmark’ could pose financial risks for Tweed Shire Planning.

Issue 8: High energy consumption and greenhouse gas emissions

Council’s water supply and wastewater infrastructure consumes high levels of energy, which is currently sourced from non-renewable sources. There are opportunities to reduce energy consumption and greenhouse gas emissions and develop energy and greenhouse gas emission targets.

Feedback from Community Groups and Community Members included the following:

High energy consumption and greenhouse gas emissions.

Tweed Shire Council proposed action

No additional options identified as part of a total water cycle management approach.

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 101)

Our Comment

Tweed Heads Environment Group Inc. advises that the Tweed Shire Council's State of the Environment Report 2010 / 2011 reports, that 7238 ML of the 8726 ML of reclaimed water was dumped annually into the already nutrient rich Tweed River, with only 4.8 % of reclaimed water being reused.

The amount of dumped reclaimed water is likely to double as the Banora Point Reclaimed Water Treatment Plant has been recently upgraded by 50% to provide 75,000 EP.

The dumped reclaimed water might be considered as a waste of 75% in electricity costs, which had been expended for the treatment and delivery of this drinking water to the Tweed ratepayer.

The Independent Pricing and Regulatory Tribunal in releasing its pricing for Recycled Water in NSW for Sydney Water and Wyong Shire Council advised usage prices for recycled water at Rouse Hill will be progressively increased so as to equal 80% drinking water usage charge. (AWA Water News for week ending 24 September 2006).

The currently dumped Tweed reclaimed water could rightly be valued as to equalling 80% of today's drinking water usage charge.

Issue 9: Best-Practice Compliance

While Council currently substantially complies with the NSW government best-practice requirements, the Strategic Business Plans and Development Servicing Plans require regular review to remain compliant.

In addition, water usage patterns for existing multi-residential properties needs to be better understood.

Feedback from Community Groups and Community Members included the following:

Best-Practice Compliance

Tweed Shire Council proposed action

No additional options identified as part of a total water cycle management approach.

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 102)

Our Comment

Insofar of the NSW government best-practice requirements of total water cycle management, Tweed Heads Environment Group Inc. considers that Tweed Shire Council should provide the community the following reasons:

- why it has so far not reused the harvesting of bulk stormwater;
- reused 'grey-water' already on urban sites;
- not reused dumped reclaimed water at new green-field sites for external irrigation and
- not maintained water quality objectives for the Cobaki and Terranora Broadwaters.

While it is understood that NSW Planning has approved some of these 'greenfield' sites, Tweed Heads Environment Group Inc. considers that NSW Planning would not have done so unless they had the direct approval of Tweed Shire Council planners.

Tweed Shire Council should also provide the community reasons as to how they are complying with the following Water-supply objectives:

National Water Initiative and Best-Practice Management

The NWI provides objectives, outcomes and agreed actions to be undertaken by state and local governments across all aspects of water management. TSC is required to demonstrate compliance with the NWI by encouraging best-practice through effective, efficient and sustainable water supply and wastewater businesses.

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 33)

The State Government Weirs Policy does not support new or expanded dams.

The NSW Weirs Policy states:

An increase in town water supply for the purposes of meeting projected population demand cannot be used as a justification to approve a proposal to build a new, or expand an existing weir, if environmentally friendlier alternatives to meeting that demand exist which are also economically feasible.

(Approvals for New or Expanded Weirs - Page 3).

It would make economic sense to actively explore other water supply alternatives other than dams.

Our Comment

Tweed Heads Environment Group Inc. has noted Tweed Shire Council's inability to finalise any new potable water saving proposal with large 'greenfield' developers at Bilambil Heights, Cobaki Lakes, Kings Forest and Terranora E.

Council, citing reasons, which have been already overcome by many NSW Local Authorities and our neighbouring region have based their controversial decision on:

- the high capital and operation costs of a recycled water scheme, considered to outweigh the advantages of reduced potable water consumption and
- discharge of nutrients to waterways.

(Page 40, Six Year IWCM Review, Background Paper).

3.5.2 Urban Town Water Supply

Issue 11: There is currently no mechanism to promote retrofit of rain water tanks or installation of large rainwater tanks in new development

Council's policy for rainwater tanks in urban areas encourages the installation of rainwater tanks to provide non-potable water for outdoor uses, flushing toilets and washing machines. However there is no incentive to install tanks larger than required by BASIX or to retrofit existing properties. Continuing and expanding the existing rebate program and introduction of innovative education and incentive programs are well supported by the community but will require significant additional investment.

Feedback from Community Groups and Community Members included the following:

There is currently no mechanism to promote retrofit of rain water tanks or installation of large rainwater tanks in new development

Tweed Shire Council proposed action

Options 7e and 7f are also appropriate as a component of a total water cycle management approach and 7a - Adopted Demand Management Strategy: No rebate for rainwater tanks
7e – Review of effectiveness of rainwater tanks

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 102)

Our Comment

Tweed Heads Environment Group Inc. notes that: "Council's policy for rainwater tanks in urban areas adopted in 2011 encourages the installation of rainwater tanks to provide non-potable water for outdoor uses, flushing toilets and washing machines.

All new residential development must comply with the State Government's Building Sustainability Index (BASIX) which requires 40% reduction in potable water use per household through a combination of rainwater tanks, water efficient appliances, garden design or recycled water reuse." (2.7.3 Rainwater Tanks)

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 20)

The Tweed Shire Council Final Draft Integrated Water Cycle Management (IWCM) Strategy 2014 advises:

A range of rainwater tank rebate programs are currently offered in other parts of Australia.

The rebate programs are regularly reviewed and modified but some current programs are as follows:

- South Australia - up to \$200 for a new stand-alone rainwater tank with a capacity of 1,000 litres or more which is not connected to household plumbing;
- Victoria - \$850 (2,000L to 3,999L connected to toilet and/or laundry), \$1,300 (4,000L or greater connected to toilet or laundry), \$1500 (4,000L or greater and connected to toilet and laundry) and \$500 for tank to toilet and/or laundry connections;
- Rous Water - Rous Water offers three levels of rebate, based in the first instance on the tank volume (\$100 for 2,000 – 4,499 L, \$400 for 4,500 – 8,999 L and \$500 for 9,000 L or more). Additional rebates are available if rainwater from the tank is supplied for flushing toilets (\$500) and/or to the washing machine (\$500); and
- Queensland - \$1,500 for rainwater tanks installed up to 3,000 L which are internally plumbed to either a toilet or toilets and a laundry cold water tap.

Rous Water estimates that the installation of tanks has reduced average household water use by 50 kL/c.

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 60)

Tweed Heads Environment Group Inc. advises that when rainwater tanks were installed in 236 000 homes in SEQ as part of the Queensland Government's Water-Wise Rebate Scheme; Tweed Shire Council only installed 117 tanks.

The SEQ tank fit-out represents a penetration rate of almost one in four detached and semi-detached dwellings.

Recommendation: Tweed Heads Environment Group Inc. supports a rainwater tank rebate program

Issue 12: Council's 2013 target for non-revenue water is not likely to be achieved

Council's target of 10% non-revenue water (NRW) by 2013 is not likely to be achieved as the 5 year average is 13.7%.

It is expected that the implementation of projects to reduce leakage and unauthorised use of standpipes will reduce the level of NRW over time.

These "real losses" represent a wasted resource, reduce the effective capacity of a water supply system and may result in unnecessary operating costs, and so a long-term water loss reduction program needs to be developed and included in Council budgets.

Feedback from Community Groups and Community Members included the following:

Council's 2013 target for non-revenue water is not likely to be achieved

Tweed Shire Council proposed action

A water loss management program is also appropriate as a component of a total water cycle management approach

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 102)

Our Comment

Tweed Heads Environment Group Inc. notes that the loss of Non-Revenue Water in 2006 was 1274 ML per annum. In 2036 the drinking water loss is forecast at 2735 Million Litres annually.

For 2009/2010 the lost amount was 1499 ML.

The Tweed Shire Council's State of the Environment Report 2010 / 2011 reports, that in the non-residential use of drinking water, Unaccounted for Water has risen to 16.23%.

Issue 13: Augmentation of the Tweed District Water Supply will be required in future due to population growth although the timing and additional supply required are unclear

Data on current population growth rates suggest that augmentation of the Tweed district water supply will not be required until approximately 2030 and possibly beyond that time frame. However there are uncertainties regarding future population and demand as well as climate change implications and secure yield, and it is important to continually review available data to optimise the timing of the significant investment that will be required.

Feedback from Community Groups and Community Members included the following:

Augmentation of the Tweed District Water Supply will be required in future due to population growth although the timing and additional supply required are unclear

Tweed Shire Council proposed action

11c – Identify opportunities for increased water recycling: Implement recycling in future developments supported by servicing strategies and development controls

Climate change adaptation programs and demand management measures in Level 2 are also appropriate as a component of a total water cycle management approach

8a - Future Water Supply Augmentation: need for future augmentation is recognised and assessment of options has been undertaken.

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 103)

Our Comment

In regards to Council's water and wastewater businesses, Tweed Heads Environment Group Inc. notes the following:

Since 2010, two preferred water supply augmentation options that have been either (i) recommended by Council officers or (ii) identified by Council, and both are water storages, namely:

- Increasing the capacity of the existing Clarrie Hall Dam at Doon Doon Creek
- Building a water storage on Byrrill Creek – [considered prohibited in the Tweed Alluvial Water Sharing Plan (2010)]

(Council Meeting Date: Tuesday 17 July 2012, Page 327)

In this matter, it is also noted that in the IWCM information provided by the Tweed Shire Council makes little mention of the extensive community consultation of the Tweed District Water Supply Augmentation Project, completed in March 2010.

At the last meeting of the Community Working Group (CWG) on the 1 March 2010, a majority of Community members signed a formal statement:

“We strongly urge Council to commission an independent expert review of the need for additional water supply, prior to the commencement of detailed planning or environmental impact assessment of the preferred water supply option.”

We now request that Tweed Shire Council seek an independent review of the Option selection process; the water demand management projections; projected population growth; and that the impacts of climate change scenarios be carried out.”

Unsatisfied with the limited options presented to the Tweed Shire Council by Montgomery Watson Harza (MWH), a company which had links with the 'failed to be built' Traveston Dam, the Tweed CWG requested:

- “Members of the CWG and our community request that Council seek an expert Independent Review from a reputable institution like the Institute for Sustainable Futures, University of Technology Sydney or the CSIRO and not just only another water consultancy. The independent expert should review the Option selection process; water demand management projections; projected population growth; and the impacts of climate change scenarios”.
- WaterTSC advised CWG Members in December 2009 that: “an expert review of the entire process and EIS recommendations will be carried out by an independent consultant to give Council further certainty before applying for development approval.”
- The CWG considers that the Water Project Team has not built a convincing business case for either Dam option without considering an adequate reduction in Tweed Shire's demand for water including reuse and new supply programs

It is with concern that we note:

That the Tweed Shire Council is still proceeding with its two Dam water supply options without seeking an Independent Inquiry as promised to the Tweed Community CWG by the Water Team and not expand National Water Initiative (NWI) water reuse options.

Water Supply Augmentation

Considerable investigations have been conducted to identify augmentation options for the Tweed's water supply. However, water supply augmentation will not be required as soon as initially predicted due to lower than expected population growth rate and successful demand management measures.

As such, the recommended short-term focus is on:

- Updating and refining supply forecasting to address uncertainties and optimise the timing of the significant investment that will be required
- Monitoring population growth and reviewing demand projections
- Confirmation of secure yield, taking into account factors such as climate change and surface water availability.

[Tweed Shire Council 2013 Integrated Water Cycle Management Strategy]

Our Concern

Tweed Heads Environment Group Inc. notes that despite the continued consultation and investigations, key decisions such as water supply augmentation have not been satisfactorily progressed by Tweed Shire Council.

Considerable community angst, not yet resolved, has been created and will continue to be contentious given the competing community desires.

Issue 14: The drinking water catchments are impacted by current and historical land use and development

The catchments for Clarrie Hall Dam and Bray Park Weir are impacted by historical and current agricultural land management practices as well as the impacts of on-site sewerage management systems.

While treatment facilities at Bray Park and Tyalgum have been upgraded to provide additional treatment reliability, there are opportunities for improved catchment management activities to control pollution at the source including agricultural land management, urban stormwater quality improvements, riparian management, point source pollution controls, education and catchment development controls.

Feedback from Community Groups and Community Members included the following:

The drinking water catchments are impacted by current and historical land use and development

Tweed Shire Council proposed action

17g – Total water cycle management framework and sub-catchment plans:

Develop a total water cycle management framework for the Tweed Shire

Specific drinking water quality measures would be required to comply with the ADWG.

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 103)

Our Comment

Tweed Heads Environment Group Inc. notes that:

- dividends from council's water supply and wastewater businesses are used to fund stream bank protection works. (Page 20, Six Year IWCM Review, Background Paper)
- Particular controls are required to be included in the LEP for drinking water catchments are supported (Page 24, Six Year IWCM Review, Background Paper).
- That there are community concerns that the seeking of new catchment funding may not be justifiable as an allowable cost in Tweed District Water Supply Augmentation Project.

As to why cattle, seen grazing on the grasslands edging the polluted Clarrie Dam is allowed to continue, is of concern.

Other areas that contribute to serious Tweed River pollution during heavy rain events include uncontrolled drainage from public roads and private easements upstream of Bray Park Weir.

Issue 16: Drought contingency and water supply emergency management measures need to be further developed

Given the predicted delay until augmentation of the Tweed District water source is required, it is considered appropriate to reassess the water supply failure scenarios including normal, restricted and emergency demand requirements. This assessment should consider the impacts of water sharing plan rules, potential fish passage requirements, proposed catchment management measures and effectiveness of the upgraded Bray Park WTP. Feasible contingency measures to cater for emergency scenarios (e.g. drought, infrastructure failure, raw water contamination) will also need to be developed.

Feedback from Community Groups and Community Members included the following:

Drought contingency and water supply emergency management measures need to be further developed

Tweed Shire Council proposed action

No additional options identified as part of a total water cycle management approach

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 103)

Our Comment

The Tweed Shire Council Final Draft Integrated Water Cycle Management (IWCM) Strategy 2014 advises:

‘A small emergency connection (approximately 3 ML/d) to the South-East Queensland water grid is in place at Tweed Heads but there is no water use agreement in place with SEQ Water and TSC believes it is unlikely that water would be provided during a drought situation given that SEQ would probably be experiencing similar climatic conditions.’

Other emergency supply and drought management options have been considered but require further investigation (Refer Section 4.2.4). (Page, 19).

SEQ Water now considers the SEQ Water Grid drought proof since the construction of the Tugun Desalination Plant, now operating on stand-by mode, and the doubling of size of the Hinze Dam.

TSC’s belief that it is unlikely that water would be provided by SEQ during a drought situation seems unfounded and this matter should be further investigated by council planners.

Issue 19: Council and the community have a desire for increased water recycling but there are significant barriers to implementation of recycled water schemes within the Tweed Shire

Council has a target for 15% of treated effluent to be reused by 2013, however, this target is not likely to be met, with between 5% and 9% of wastewater currently being recycled. Increasing regulations, treatment requirements and cost associated with use of recycled water contribute to this issue.

With the current Council direction and policy relating to recycled water use, the initiative to implement recycling is left to the developer which provides little incentive for recycling. Nonetheless, future planning and assessment of recycled water schemes must weigh up the high cost to the community

Feedback from Community Groups and Community Members included the following:

Council and the community have a desire for increased water recycling but there are significant barriers to implementation of recycled water schemes within the Tweed Shire

Tweed Shire Council proposed action

11c – Identify opportunities for increased water recycling

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 104)

Our Comment

The Tweed Shire Council Final Draft Integrated Water Cycle Management (IWCM) Strategy 2014 advises on the increased use of recycled water:

- Council is limited in its ability to influence residential developments already approved at state government level but not yet constructed. Council should consider future policy development in this area and opportunities for increased water recycling as an integral part of Council's servicing strategy for future developments.
- A comprehensive consultation program central to the IWCM Strategy Review, was undertaken over 2012 and 2013. It is reported that a number of community suggestions, such as the increased use of recycled water and a rainwater tank rebate, (being looked at) were made.

Tweed Heads Environment Group Inc. notes that Council's previous decision not to reuse reclaimed water or grey-water systems means that some 36,000 new residents who will reside in the new greenfield areas by 2041 will continue their wastage of costly potable drinking for outside irrigation.

It is of interest that the Tweed Shire Council Water Unit was not able to come to some flexible agreement with the nearby Banora point Golf Club for the supply of reclaimed water.

That club has now closed a major part of its golf course because of drought conditions.

3.5.4 Urban Stormwater Management

Issue 21: Increased emphasis on water sensitive urban design will require more integrated Council responsibilities, increased community education and increased staff capabilities and funding

The draft *Tweed Urban Stormwater Quality Management Plan* (Australian Wetlands, 2011) has a strong emphasis on achieving water quality objectives for downstream waterways. The Plan refers to guidelines, resources and tools that should be used to implement best-practice stormwater management, many of which have been developed by the Water By Design program for the South East Queensland Health Waterways Partnership. Implementation of the WSUD framework will require significant strategic planning, community education and additional resources to be effective.

Feedback from Community Groups and Community Members included the following:

Increased emphasis on water sensitive urban design will require more integrated Council responsibilities, increased community education and increased staff capabilities and funding

Tweed Shire Council proposed action

14b - Greater integration of WSUD across Council: Develop whole-of Council framework for WSUD covering full asset lifecycle

17g – Total water cycle management

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 104)

Our Comment

Tweed Heads Environment Group Inc. notes council's following comments:

- "D7 does not currently allow for consideration of sensitive receiving environments".
- "Council has limited power to enforce WSUD and ESD principles in developments approved under Part 3A of the EP&A Act (now replaced by the State Significant Assessment System)." (Page 13, 42, Six Year IWCM Review, Background Paper).

While Council is to continue liaison with Proponents of Developments to promote WSUD and ESD in accordance with (NSW government best-practice requirements), unacceptable stormwater drainage pollution to SEPP 14 Wetlands, Cobaki Creek and Cobaki Broadwater from new Cobaki development earthworks continue unabated.

Tweed Heads Environment Group Inc. raises the question:

Why would The Draft Urban Stormwater Quality Management Plan (Australian Wetlands, 2011) which has a strong emphasis on achieving water quality objectives for downstream waterways be any more effective than the 'failed' 'D7' Stormwater Quality Management Plan?

Issue 22: Existing Council development controls do not fully address the residual load of urban stormwater on downstream sensitive waterways

For some developments, existing Council development controls (e.g. D7) can be satisfied through design of stormwater pollutant reduction systems yet residual loads may be detrimental to downstream sensitive waterways.

In these cases, compensatory activities to offset residual and cumulative impacts of stormwater discharge into waterways may be considered, however, guidelines and policy mechanisms are required to enforce offsets and address the residual impacts.

Feedback from Community Groups and Community Members included the following:

Existing Council development controls do not fully address the residual load of urban stormwater on downstream sensitive waterways

Tweed Shire Council proposed action

14b - Greater integration of WSUD across Council

15b - Develop guidelines for compensatory measures – formalise policy for addressing impacts of urban development

17g – Total water cycle management

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 105)

Our Comment

Tweed Heads Environment Group Inc. notes Council’s statement that:

- “D7 does not currently allow for consideration of sensitive receiving environments.
- There is a need for regular and accurate identification and mapping of these sensitive areas as well as development of guidelines for their protection.” (Page 42, Six Year IWCM Review, Background Paper).

Our Comment

For many years Tweed Heads Environment Group Inc. and the Tweed Community have been lodging complaints about stormwater pollution from the Cobaki development earthworks draining into the sensitive SEPP 14 Wetlands, the Cobaki Broadwater, without any satisfactory remedy by Council.

Hopefully, the Tweed Shire Council Final Draft Integrated Water Cycle Management (IWCM) Strategy 2014 will rectify this reported pollution.

Issue 23: Existing subdivision erosion and stormwater controls and resources are not adequate for the rainfall and rate of development experienced in the Tweed

Resources for inspection and/or enforcement of Council’s erosion and sediment control requirements for new developments are limited and Council relies on complaints or inspections to highlight inadequacies in control systems.

Feedback from Community Groups and Community Members included the following:

Existing subdivision erosion and stormwater controls and resources are not adequate for the rainfall and rate of development experienced in the Tweed

Tweed Shire Council proposed action

16b – Review and update erosion and sediment controls and provide increased resources:

Improved coordination, education and enforcement and increased resources

17g – Total water cycle management

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 105)

Our Comment

Tweed Heads Environment Group Inc. advises that the following EHMP Health Report provides an example where existing subdivision erosion and stormwater controls and resources are not adequate for the rainfall and rate of development experienced in the Tweed:

The (International Water Centre – 2009) EHMP Health Report Card provided a health report, which states “To keep the chlorophyll-a concentration low enough to ensure a healthy functioning ecosystem, *it is necessary to reduce total catchment dissolved inorganic nitrogen (DIN) loads by approximately 30% in both the Terranora and Cobaki Broadwater catchments.*”

It is of some concern that an updated 2012 Tweed River Health Report which has presented to Council does not provide any answers to remedying the Terranora and Cobaki Broadwater pollution, now being evidenced as algal blooms in the Terranora Inlet and in the Jack Evans Boat Harbour.

3.5.5 Catchment Management

Issue 24: There is a need for a holistic catchment management strategy for the Shire

There is currently no framework for coordinating catchment management activities across the Shire. Existing estuary management plans and coastal zone management plans for estuaries have been developed through the state government's planning process. While the more recently updated plans have acknowledged the upstream catchment areas as affecting the health of estuaries, the main focus is on the health of the estuarine reaches. If a total catchment approach to water cycle management is desired, there is a need to strengthen the linkages between existing catchment management, plans for estuary management, agricultural management and IWCM programs and activities.

Feedback from Community Groups and Community Members included the following:

There is a need for a holistic catchment management strategy for the Shire

Tweed Shire Council proposed action

17f – Review of Stream Bank Protection Policy and River Health Grants Program: Improve delivery mechanism

17g – Total water cycle management

17i – Monitoring Evaluation and Reporting program: to support TWCM framework

Tweed Shire Council 2013 Integrated Water Cycle Management Strategy (Page 105)

Our Comment

Tweed Heads Environment Group Inc. considers that the focus of IWCM programs and activities should continue to be in those areas providing Tweed's drinking water catchment supply to Bray Park Weir and the Tyalgum Water Treatment Plant catchment.

The future harvesting of bulk stormwater and coastal groundwater supplies should also be protected from polluting development.

Costly additional mid Catchment Funding amounting to \$2.9 million dollars seems inappropriate when council are unable to currently fund the remediation of identified polluted downstream waterways.

Links to Council's Environmental Sustainability Strategy

The Tweed Shire Council Final Draft Integrated Water Cycle Management (IWCM) Strategy 2014 advises that: 'The IWCM Strategy will be tied into the Council's broader Environmental Sustainability Strategy (ESS) and the overall resourcing, priorities and funding set by that program.

The ESS is still in the early stages of development and an initial framework isn't expected until 2015.

The ESS is likely to impact on the feasibility of currently unfunded IWCM Actions.

As such, in the short to medium term the focus is likely to be on IWCM Actions that Council is able to fund, then on meeting the minimum NOW requirements.

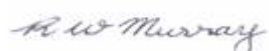
Any remaining outstanding IWCM Actions would be the focus in the medium to long term.'

Our Comment

Tweed Heads Environment Group Inc. now awaits the final approval of Tweed Shire Council's broader Environmental Sustainability Strategy and how The Tweed Shire Council Final Draft Integrated Water Cycle Management (IWCM) Strategy 2014 will be tied into a connecting overall environmental strategy.

Tweed Heads Environment Group Inc. requests that council considers this submission, and acknowledge receipt of this document.

Yours sincerely



Richard W Murray
Secretary

Tweed Heads Environment Group Inc.