



# Tweed Heads Environment Group Inc.

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15 November 2006

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

Dear Sir,

**Re: Submission for the Tweed Shire Council Water & Wastewater Activity Management Plan (WWAMP) 29 July 2006 – (Closing date for submission 16 November 2006)**

Tweed Heads Environment Group wishes to make a submission in regards to the following components of the Tweed Shire Council Water & Wastewater Activity Management Plan (WWAMP) 29 July 2006.

## **A. The Wastewater Activity Management Plan**

In regards to the two Terranora Creek 's Banora Point and Tweed Heads West Sewage Treatment Plants, the Wastewater Activity Management Plan of the Tweed Shire Council provides for:

1. the construction of an upgraded Banora Point Sewage Treatment Plant and
2. a new West Tweed Heads Sewage Treatment Plant costing \$41.9 million dollars, due to commence 2012).

Our concerns for the Wastewater Activity Management Plan (WAMP) in respect of the above infrastructure are summarised as follows:

- These two Terranora Creek' sewerage treatment plants do not have EPA licencing approval for their 200% increase disposal of reclaimed wastewater to the already 'sick' Terranora Inlet.
- Council's final approval has not been given to continue the dumping sewage waste into the closed Terranora System of the Cobaki and Terranora Broadwaters nor their ugrade.
- Community Reference groups considering wastewater disposal, have consistently opposed the 'dumping' of increased quantities of reclaimed wastewater into Terranora Creek's because of its known 'poor' ecosystem health and their well founded recommendations have not been allowed.
- because of adverse water quality in the Terranora Broadwater Kirk ham's Oysters, Tweed's last major oyster grower quit their Terranora Broadwater oyster leases in 2006. The loss of this oyster growing industry adds to our claim of poor water quality in the Terranora system.
- The above WAMP plan has been developed without full consideration of Issues & Objectives (Para.17.1 p.24, 252). Assumptions of wastewater approvals are included in the WAMP as fact thus providing an incorrect plan.
- On the 8 April 2004, Richard Hagley, Natural Resource Office (North Coast- Coast & Estuaries) advised our group, that: "the Tweed River Committee resolved to repeat the Tweed River Ecosystem health Monitoring and place it in the 2005/6 works program".  
Tweed River Committee Minutes dated 5 September 2006 indicate that the repeat of the Tweed River Ecosystem health Monitoring study has not yet been done. Such health monitoring studies should be completed before any further sewage discharge approvals are allowed in the Lower Tweed Estuary.
- In view of nationwide and regional concern on drinking water shortage Tweed Shire Council's plan not to reuse reclaimed wastewater beyond 5% is considered to be unacceptable by the community and contravenes government policies.
- Public IWCM submissions, which were received by Council in August 2006, have not been considered in this WWAMP planning document.
- The 'Catchment Specific Assessment of Nutrients' program to reduce significant nutrient loads (conservatively estimated 88.1 tonnes of Total Nitrogen and 15.3 tonnes total Phosphorus per year) entering the Terranora System should be a high priority in this plan by Council. This 'high' nutrient load is in addition to the future nutrient load totaling 54.4 tonnes (TN/TP) per year from Terranora Creek 's Banora Point and Tweed Heads West Sewage Treatment Plants

In regard to the above concerns Tweed Heads Environment Group refers to the following assessment of 'poor water quality' within the Terranora System and Tweed Shire Council's response:

**The Tweed IWCM context Study and Strategy (1<sup>st</sup> Report – March 2006)**

The Tweed IWCM context Study and Strategy (1<sup>st</sup> Report – March 2006), Appendix C, page 5 reports: "Terranora and Cobaki Broadwaters are both shallow water bodies with reasonable water quality".

**Our Comment - assessment of 'poor water quality' within the Terranora System**

We totally disagree with the current assessment of 'reasonable' and point out to Terranora System ecosystem health reported in The University of Queensland Report "Tweed River Estuary Ecosystem Health Monitoring Program (TREEHMP) (2000 to 2001) – Final Report 2003.

Present ecosystem health within the Terranora System, (particularly in the Broadwaters) indicate that water quality conditions have changed. The recent closure of a long term Terranora Broadwater oyster growing business and increasing appearance of Terranora System algal blooms indicate deteriorating water health.

**Background**

In the Minutes of the meeting of Tweed Shire Council dated 15 March 2000, it was approved that: "Council in the first instance, seeks Environmental Protection Authority (EPA) approval of a strategy to increase the licensed discharges at the existing outfalls to 72,000ep for Banora Point and 12,000ep for Tweed Heads with significantly enhanced effluent quality".

While the TREEHMP report may have indicated reasonable water quality of the "Terranora and Cobaki Broadwaters" during the period of UQ study in 2000, the present ecosystem health of the Terranora system is unknown as a repeat of the Ecosystem Health Monitoring Program has not been carried out.

Anthropogenic nutrient impact assessment in The University of Queensland Report "Tweed River Estuary Ecosystem Health Monitoring Program (2000 to 2001) – Final Report 2003 Estuary Ecosystem Health (pages 152/3) reports on the ecosystem health of the Terranora System:

**“4.5.7 Tracing Nutrients in Wet Season – Terranora System (page152)**

- A strong gradient in **sewage impact** was clearly evident across the System with highly enriched values recorded at the mouth of the Inlet, significant enrichment recorded at the TI2, near the Banora Point Sewage Treatment Plant, and then decreasing into the **Broadwaters**.
- An enriched signal was evident in the **Terranora Broadwater**
- The parallel trend in nitrogen tissue content and stable isotope enrichment provides evidence of its combined use as a tool to distinguish between nitrogen sources.

**4.5.8.1 Tracing Nutrients in Dry Season – Terranora System (page 152)**

- The most enriched signal was found at TI2, the site close to the Banora Point Sewage Treatment Plant outfall.
- Similar to the ambient data in the wet season, the **Terranora Broadwater was enriched** in nitrogen.
- Again, the parallel trend in nitrogen tissue content and stable isotope enrichment provides evidence of its combined use as a tool to distinguish between nitrogen sources.

**4. 5. 9 Tracing Nutrients in Flood Event – Terranora System (page153)**

- The most enriched site was again found at site TI2, near the Banora Point Sewage Treatment Plant outfall.
- The active bioindicators showed some **enrichment in both the Cobaki and Terranora Broadwaters**.
- The long-term passive indicators showed very high enrichment for the site next to the Banora Point Sewage Treatment Plant **as well as the Terranora Broadwater**

*Tweed Heads Environment Group claim of increasing algal blooms for the upper Terranora Inlet System near the two sewage treatment outfalls is supported by the following finding:*

**Key Findings of The University of Queensland Report “Tweed River Estuary Ecosystem Health Monitoring Program (2000 to 2001) – Final Report 2003” (6.14 - page 220) advise:**

**6.14.5 Terranora Inlet Key Findings (page 222)**

- The Terranora Inlet exhibited a marked gradient in water quality due to the localised eutrophic hotspot near the **Banora Point Sewage Treatment Plant**.
- Exposed to sewage  $\square$  N in the wetter periods.
- Localised nutrient hotspot near **Banora Point Sewage Treatment Plant**.
- Low turbidity but light limitation **indicating high bloom risk waters**.
- This hotspot appeared to be localised as the inlet mouth was flushed.

**4. 7. 3. 1 Terranora System (page 171, 172)**

- The mouth of the Terranora Inlet exhibited “sewage impacts” in the wet and flood. This sewage influence no doubt arises from the sewage release further upstream at the Banora Point outfall and exposes the Inlet mouth to sewage-derived nitrogen.
- Upstream at the Banora Point Sewage Treatment Plant, a considerable sewage impact was evident all year round. **The highest phytoplankton response** throughout the Terranora System was found in the **Terranora Broadwater and to a lesser extent in the Cobaki Broadwater**.
- The Broadwaters exhibited poor health in the wet and flood event as indicated by the suite of biological indicators
- The ecosystem is taking up locally released sewage nitrogen, and phytoplankton populations are responding to elevated nutrients to a certain extent.
- There was good agreement between water quality measurements and anthropogenic nutrient bioindicators”.

**A scientific paper indicating Tweed River Estuary ecosystem health concerns: “Assessing the Seasonal Influence of Sewage and Agricultural Nutrient Inputs in a Subtropical River Estuary”**

The situation (Tweed River ecosystem health) in the Terranora System is representative of other parts of the Tweed River where sewage effluent is discharged.

For example the August 2003 edition of the prestigious scientific journal ‘Estuaries’ (Vol. 26, No. 4A, p. 857-865 August 2003) contains a paper titled “Assessing the Seasonal Influence of Sewage and Agricultural Nutrient Inputs in a Subtropical River Estuary” authored by Simon D. Costanzo, Mark J. O’Donohue, and William C. Dennison. This paper uses the Delta ( $\delta$ 15 Nitrogen methodology in the Tweed River to demonstrate: -

- “Mangrove and macroalgal tissue (Delta  $\delta$ 15 N and % N proved a successful combination for discerning sewage and agricultural inputs. Elevated (Delta  $\square$ 15 N and % N represented sewage inputs”. P. 857.
- “The continuous discharge of sewage N (enriched in  $\delta$  15 N) at 9 km up-river, results in a continuous elevated (Delta  $\delta$  15 N signature in mangroves and macroalgae adjacent to this sewage outfall”. P. 863-864.

The above report notes that sewage nitrogen from the sewage treatment plants is impacting upon the Tweed Estuary’s mangroves and phytoplankton 9 klms from the River mouth. The amount of sewage nitrogen impact needs to be measured as high nutrient levels can seriously affect the Tweed River’s ecosystem health.

On the 8 April 2004, Richard Hagley, Natural Resource Office (North Coast- Coast & Estuaries)

Advised our group, that: “the Tweed River Committee resolved to repeat the Tweed River Ecosystem health Monitoring and place it in the 2005/6 works program”.

The Tweed River Ecosystem Health Monitoring Program has not been repeated and requires urgent completion before any further sewage discharge approvals to the Tweed River are given

**Requested information sought but not supplied by Tweed Shire Council**

*On the 11 January 2006 Tweed Heads Environment Group wrote to Council's consultant GHD Pty Ltd in response to their emailed Submission Review Report of 15 December 2005 in regards to Banora Point/West Tweed Heads STP's Reclaimed Water discharge.*

*A reply to our letter of 11 January 2006 requesting the following additional information has still not been received:*

**Request No 1**

*Tweed Heads Environment Group requests that you provide the following information:*

- *Recent water quality monitoring data - Please forward details of the times and locations from which recent water quality monitoring data was collected.*
- *Comparison table showing modeling results correlated with recent water quality monitoring data.*
- *Why was the MUSIC water quality modeling of the Terranora Inlet System Catchment used rather than a Catchment Specific Model that is considered to be more accurate?*
- *Would you agree that the implementation of a catchment program to significantly reduce nutrient loads entering Terranora Creek is a high priority for Council?*

**Request No 2**

*Tweed Heads Environment Group would be pleased to receive your response to the following concerns:*

1. *The increase of Tweed River algal blooms in the Terranora Inlet System,*
2. *The increased presence of the flesh eating pathogen *Vibrio vulnificus*,*
3. *Terranora Inlet System borne infections to residents and visitors,*
4. *Trichodesmium blooms 'red tide swimming-itch',*
5. *Concerns about Terranora Broadwater's water quality on local oyster (production)/consumption.*
6. *Absence of benthic-animals, in the mangrove habitat of the mangrove islands adjacent to the two Terranora Inlet sewage wastewater outfalls.*
7. *Are dangerous Pfiesteria type alga, known to bloom in sewage and nutrient enriched warm estuarine waters, present in the closed Terranora Inlet System?"*

**Request No 3**

*Tweed Heads Environment Group raises the question:*

*Has the 90%ile data (as presented at Community Reference Group meetings in 2003-2004) been the basis for measuring past sewage nutrient loads and if so has the 'lower load rating of 50%ile data' been adopted to 'smokescreen' the lack of data on the Inlet's ecosystem health? Your reply is requested on this matter.*

**Request No 4**

*Tweed Heads Environment Group requests a reply to Tweed Heads Environment Group letter dated 23 February 2005.*

**Request No 5**

*Tweed Heads Environment Group advises that there is sufficient information to indicate that the Terranora Inlet System is 'sick' and requests that you explain the differences between your statement and the Council's monitored results.*

**Our submission dated 11 August 2006 and other public submissions on the Tweed Integrated Water Cycle Management (IWCM) Context Study & Strategy 1<sup>st</sup> Report March 2006 (not included in this plan)**

Tweed Heads Environment Group considers that our submission dated 11 August 2006 on the Tweed Integrated Water Cycle Management (IWCM) Context Study & Strategy 1<sup>st</sup> Report March 2006 and other public submissions are relevant to this Wastewater Activity Management Plan.

Our IWCM submission stated:

"Tweed Shire Council publication Tweed link June 2006 advises:" Water is a precious natural resource for the maintenance of ecosystems and human activities. Much of Australia is now at the limit of its available water resources" and:

1. "There is clear evidence of the degradation of our rivers, groundwater and estuaries"

2. "Successful Integrated Water cycle management depends on our capacity to find alternative uses for recycled water and smart use of our finite water resources"
3. "The Integrated Water Cycle Management is the integrated management of the water supply, sewerage and stormwater services within a whole of catchment strategic framework and provides along term focus on the integrated delivery of these services"."

Tweed Heads Environment Group Inc notes that public submissions (closing August 2006) were invited from the Tweed Shire community seeking comment on Tweed Integrated Water Cycle Management (IWCM) Context Study & Strategy 1<sup>st</sup> Report dated March 2006.

Public IWCM submissions, which could influence strategic infrastructure planning; have not been considered in this WWAMP planning document, and thus the plan is flawed.

Tweed Integrated Water Cycle Management (IWCM) Context Study & Strategy 1<sup>st</sup> Report dated March 2006.  
IWCM document - Level of service for sewage treatment and water treatment on Tweed Heads West and Banora Point STPs

Our Comment on Tweed Heads West and Banora Point STPs are as follows: -

1. Tweed Shire Council advises: "that the (Tweed Heads West STP – licenced (10,000 EP) with a connected load of 10,500 [EP], although upgraded, has been unable to meet EPA licence conditions, and will need to be demolished to make way for a new STP".

**Our Comment on IWCM Issue - Augmentation of Assets - STPs**

*Tweed Heads Environment Group considers that any new West Tweed Heads sewage treatment plant should be built in the Piggabeen/Cobaki valley to service the 14,000 person Cobaki Lakes subdivision, the proposed Terranora Golf Club subdivision, and other new West Tweed residential developments.*

*Reclaimed water from the new STP could be piped locally for dry land reuse at Piggabeen and Cobaki or possibly by Gold Coast City Council's Tugun \$1.12 billion dollar desalination plant now under construction next to the Cobaki Lakes subdivision.*

*A Cobaki valley sewage treatment plant would substantially improve the water quality in the Tweed River and our coastal zone, while providing significant economic benefits that include less costly sewage treatment and saved drinking water.*

*Other the dry land reuse opportunities would have more quality wastewater available.*

*However rebuilding of the 12000 EP sewage treatment plant at West Tweed Heads could be postponed in the short term as council has stated that: "Stage 3 of a proposed upgrade of the Banora Point WRP provides capacity to serve 125,000 EP", and that "the ultimate (2030) population projection for the Banora Point and Tweed Heads West WRP's is between 72,000 and 92,000. (EIS Page 7 Para 2.4.1).*

**Our Comment: IWCM Issue: Effluent discharges and urban storm water runoff**

*During heavy rain events, raw sewage is being pumped into the already contaminated Terranora Inlet System. This is because Council has failed to stop storm water being illegally discharged into its sewage system.*

*During high rain events raw sewage coupled with high levels of nutrients from the Terranora System Catchment adds to the 'known' poor health of the shallow Cobaki and Terranora Broadwaters.*

*Ecosystem health monitoring of the Tweed River Estuary, carried out during 2000-2001 by The University of Queensland, indicated that sewage nitrogen was impacting on the mangroves and "imported test algae".*

*The amount of nitrogen enrichment impacting on phytoplankton in the Tweed River is still unknown and a scheduled 'repeat' study in 2005 has still not been carried out.*

*The regular outbreak of seasonal algal blooms (Trichodesmium and other unreported algal blooms) in the Terranora Inlet might explain the diminishing stocks of recreational and commercial fish stocks and the increasing presence of Tweed River borne 'infections' to Tweed River users.*

### **Sewage overflow stations**

*For normal dry weather flow conditions, provision of sewage overflow stations should be constructed instead of River 'dumping'.*

2. Banora Point [50,000 EP] with secondary sewage treatment can cater for 62500 persons. Its connected load is 42,000 [EP] was upgraded in 1995. (Page 1 GHD Banora Point and Tweed Heads West WRP reclaimed Water Management Strategy -2004)

On 2 March 2005 Council approved that raw sewage from Tweed Heads West is pumped to the Banora Point STP for treatment so as to expedite improvement in the discharge waters to Terranora Inlet.

### **Our Comment – IWCM Issue: Tweed Shire wastewater reuse**

*Tweed Heads Environment Group advises that in a report dated 15 March 2000 to Council by the Water Unit indicates that: "the current population in the Tweed Heads – Banora Point area is predicted to increase threefold (200%) over the next thirty years.*

*The Tweed Link advises:" Around 7500 megalitres of effluent (treated wastewater) is discharged per year to various receiving waters (the majority in the Tweed River) with less than 5% of dry weather flows currently being reused.*

*Future effluent volumes are likely to increase to 13,000 megalitres annually by 2019 and 19,000 annually by 2034".*

*However when the Tweed population increases by 200%, 21,375 megalitres of tertiary treated sewage-water per year will become 'wasted' discharge into the Tweed River, if only 5% of reclaimed sewage water from Tweed's 170,000 person capacity is reused.*

*Now valued at up to \$5 per kilolitre(in some local authorities), this lost reclaimed sewage water will represent a considerable loss to Council revenue.*

*Currently each year, nearly 50 billion litre of treated wastewater is prevented from reaching Sydney's waterways as a result of efficient use of water and water recycling measure. By 2015 the figure is forecast at 156 billion litres.*

3. "The new Kingscliff Sewage Treatment plant under construction will cater for 25,000 persons and will include tertiary filtration and cost a total of \$ 39 million".

### **Comment - IWCM Issue: Wastewater Reuse – Kingscliff Sewage Treatment Plant**

*Tweed Heads Environment Group advises that the Kingscliff sewage catchment population was 13,460 (2001) with the likely population to increase to 20,000 by 2011, and 40,000 in the longer term. The ultimate Kingscliff sewage catchment population is 50,000 EP.*

*(GHD - Environmental Impact Statement (2003) Kingscliff STP Table 2-2, 2-4 pages 6/7.)*

*While the Kingscliff sewage catchment is adjacent to considerable agricultural activities, revegetated coastal village sand dunes and a number of developing residential Coastal villages, there has been little progress in the Kingscliff sewage catchment for the dry-land reuse of treated wastewater.*

### **Concerns about the process leading to the Kingscliff Sewage Treatment Plant Upgrade**

*The Marine Botany Group, The University of Queensland (UQ) in (2000-2001), undertook a Tweed River Estuary Ecosystem Health Monitoring Program (TREEHMP).*

*Although the Tweed Heads Environment Group did not receive the UQ Final Report until 21 July 2003, our group was required to undertake not to make public details of the TREEHMP Final Report given to us after several months of requests.*

*It was during this period of Council not providing the UQ Tweed River Health Monitoring final Report that public submissions (closing 31 January 2003) for the Kingscliff Sewage Treatment Plant new upgrade were invited.*

*Thus the information from the TREEHMP Report was not available for public scrutiny at the time of the EIS for the relocated Kingscliff Sewage Treatment Plant*

## **B. The Tweed Shire Council - Water Activity Management Plan - 29 July 2006**

Tweed Heads Environment Group advised in their IWCM submission:

“Bray Park Water Treatment plant is required to meet new Australian Drinking Water guidelines and meet future growth. A detailed design is well advanced with construction expected to start in 2007 at a cost of \$50 million. Because Tweed has an unprotected water supply catchment a higher level of treatment must be undertaken.”

### **Our Comment: IWCM Issue: Poor Raw water quality**

*Tweed Heads Environment Group notes that the water supply is seriously contaminated by development and agricultural activities above the ‘unprotected’ Bray Park Tweed drinking water supply weir. Your attention has previously been drawn to the likely contamination of the raw water supply by grazing of livestock next to the Bray Park weir and livestock yards (pigs etc) adjacent to the Tweed River. Other grazing and livestock activities adjacent to the drinking water supply should be controlled by Council or by a Government agency that could reduce the amount of nutrient pollution into the Tweed River drinking water source. The highest levels of raw water filtration should be provided. In the foreseeable future water users will demand water quality testing for ‘toxic contaminants’ at the household tap.*

### **Other pollutants in the Clarrie Hall Dam Catchment**

*Upstream of the Clarrie Hall Dam Catchment, a new dip-site yard has been built beside a contributing creek to the Dam supply. This is not the only dip-site in the Tweed drinking water supply area.*

*No wonder blue-green algae and contamination sources are of concern.*

*During wet Council and State owned roads, together with access to acreage properties are contributing noticeably to the transport of sedimentation/nutrients to local streams entering the raw water supply to the Tweed River.*

*These sources are clear evidence of the degradation to our Tweed River that is not adequately managed.*

*Non-the less, there are many good examples of managed access to properties and of careful drainage of public roads.*

### **Water security in Major Droughts.**

The Tweed Link advises: “In the Tweed Case it is likely neighbouring authorities will be in a worse situation before the Tweed. As there are very limited ground water resources the only emergency source likely to be available would be via desalination of salt water. Providing for contingency storage will mean bringing forward and increasing the augmentation of Clarrie Hall Dam and the potential construction and size of Byrrill Creek Dam.

### **IWCM Issue: Town water security –**

#### **Our Comment - Ground water resources**

The following question is raised in regards to underground water supplies:

*Has any underground study been carried out to determine the quantity of non-saline water for drinking purposes available, in the high water table of coastal Tweed Shire and other likely Tweed Shire areas?*

*In a recent sampling of the Tweed Heads West groundwater it was found that 95 % of sampling of readily available groundwater was non- saline and suitable for gardening purposes. With membrane treatment quality drinking water from local groundwater is available at far less cost than the desalination of seawater.*

*Brisbane Water is currently extracting 20ML of drinking water from thirty existing and new deep water bores.*

**AWA Water News 2 July 2006 states:** “Two AQUIFERS together containing more than the volume of Sydney Harbour have been found deep within sandstone on the outskirts of Sydney. The SYDNEY CATCHMENT AUTHORITY says if the aquifers are managed cautiously, the city now has a viable source of groundwater, harvestable in extreme drought”.

It can take two years before Sydney’s aquifer water supplies are available for usage.

### Desalination

The Tweed IWC context Study and Strategy (1<sup>st</sup> Report – March 2006), page 7 reports:

“There may be potential options to import or export water, particularly with the Gold Coast Council to the north who have a common boundary with Tweed Council within an urban area (Tweed - Coolangatta)”.

In this matter, Gold Coast Water advised: “Thank you for your recent email regarding desalination. The Gold Coast Desalination Alliance is currently completing further investigations on three short listed sites for the purposed desalination site.

The Tweed Shire Council is one of the major stakeholders for the site located at Tugun.”

Tugun was eventually selected by Gold Coast Water as its preferred desalination site

### **Question:**

(a) *While Tweed Shire Council's Water Unit has said it does not have any stake holding in the desalination project, has there been any approach by the developer of the (14,000 person) NSW Cobaki Lakes Residential Development to access Tugun's future desalinated water.*

*This subdivision is next to the proposed desalination plant?*

(b) *Has Tweed Shire Council approached Gold Coast Council about processing reclaimed wastewater at the nearby Tugun desalination and reverse osmosis plant from their three urban STPs at Tweed heads and Kingscliff?*

(c) *If Tweed Shire Council fails to reduce rising drinking water consumption and not proceed in a timely manner with the raising in capacity of Clarrie Hall Dam, then a Tweed desalination plant could be likely if drought conditions persisted beyond previous low dam levels (35%) in February 2003. The Tugun desalination plant will add an extra 240 kilotonnes CO2/per year, (50 000 vehicles equivalent) and contribute to increasing 'climate change' and could advance the case for a future coastal nuclear power station.*

*Does the Water Plan have a timely program to provide suitable water infrastructure*

### **IWCM Issue: Town water wastage**

The Border Mail reported on the 23 September 2005: “On the Tweed about 15 percent of the total consumption of 8500 megalitres was unaccounted for – most of it from leaks, theft and unmetered water use from hydrants, for fire-fighting and other purposes.”

### **Our Comment**

*In view of the above, Tweed Heads Environment Group considers that Tweed Shire Council's plan to target only 12% for unaccounted water by 2010 is not responding to the urgent need to save wasted water.*

*Next to Tweed Heads, the Tugun desalination plant is being fast tracked because it is required to be operational to supply urgently needed water by 2008.*

*In view of Tweed Shire Council's current 'drinking water' wastage (1125megalitres per annum), Council should improve its performance to at least 8 % (wastage) by 2008.*

*The high cost of this 'wasted' treated drinking water is highlighted by the AWA Water News report of the 23 July 2006: “The ECONOMIC REGULATORY AUTHORITY of WA published its Final Report: "Inquiry on Country Water and Wastewater Pricing in Western Australia", recommending measures to move gradually towards a more cost-reflective pricing policy. In the south, households using up to 300 KL/yr will pay a uniform \$0.82/kL, but rising block tariffs will have the biggest users paying up to \$5/kL.*

### **IWCM Issue: Stormwater Recycling - Augmentation of Assets – Clarrie Hall Dam**

The Tweed IWC context Study and Strategy (1<sup>st</sup> Report – March 2006), page 5 reports:

“Studies have shown that the use of rainwater tanks for outdoor purposes and toilet flushing can reduce potable water consumption by up to 50%”.

The Sunday Mail 25 September 2005 advises that: “Some councils - such as Gold Coast, Logan, Ipswich and Brisbane – offer extremely good financial incentives. For example, Brisbane City Council gives up to \$750 for a rainwater tank” South East Queensland has provided \$2 million dollars to residents in their purchase of approved water saving items.



### **Our Comment**

*Tweed Heads Environment Group considers that:*

*1. Tweed Shire Council should provide an incentive scheme for installation of rainwater tanks to existing residential homes with connection to internal water uses similar to other SEQ water users.*

*Like the Marriott Gold Coast Hotel chain rainwater collection scheme, Tweed commercial and public buildings could collect considerable rainwater for many reuses, reducing their own water costs and placing less demand for new public water infrastructure.*

*Tweed Shire Council's program for water efficiency should be expanded to match its neighbouring SouthRoc "Water Partners" with Government funded water tank subsidies.*

Tweed Link (March 8 2005) also advises: "Tweed Shire Council has been an active and financial member of the Southern Regional Organisation of Councils (SouthROC) since the original assessment of the region by the Qld Government's planning department as well as the local government authorities within the region. It is the only NSW local government within SouthROC organization, because Tweed Shire and particularly Tweed Heads is part of the South East Qld region".

Tweed Shire Council's Strategic Town Planning Unit Report of March 2005 further advises:

"Protecting and improving regional water supply is a key point in the SEQ Regional Plan."

"The SEQ region has an existing population of 2.5 million people.

The SEQ Regional Plan allows for an additional capacity of 1.2 to 1.7 million people.

These estimates do not include the proposed future capacity of the Tweed."

- *Tweed Heads Environment Group considers that Tweed Shire Council has a social responsibility as a member of SouthROC to participate as an equal partner in protecting and improving regional and Tweed Shire's water supply.*

*AWA Water News of 12 November 2006 reports: "State borders must be ignored when making plans to tackle the nation's water crisis according to PM Howard. ([Website](#))"*

### **Tweed Shire Council Clarrie Hall Dam – Water Storage**

The Tweed Sun reports on the 8 September 2005:

**Tweed Dam overflow 'just wasted'** – ABOUT 40% of the Tweed's annual water went over the Clarrie Hall dam spillway on June 30. With Gold Coast residents on water restrictions, it has been suggested Tweed Shire Council should sell its excess to Gold Coast".

The Tweed IWCM Context Study and Strategy (1<sup>st</sup> Report – March 2006), page 6 reports:

"Initial assessments indicate the wall can be safely raised to accommodate an increased top water level (TWL) of 5 to 10m increasing the dam storage volume by up to twice the existing the existing capacity. Potential yield increases have not been assessed to date".

"Detailed assessment of options, selection of the preferred option and concept/detailed design are due to occur in 2005, with construction currently scheduled by 2012".

### **Our Comment**

*Tweed Heads Environment Group has been advised by Council that in regard to the raising of the Dam wall project, the proposed detailed assessment of options, selection of the preferred option and concept/detailed design are due to occur in 2005, a final report is expected later in 2006.*

*As a partner in SouthROC, Tweed Shire Council should increase its future water supply.*

*Gold Coast City Council has estimated that there is an urgent need for water by November 2008.*

AWA Water News report of the 23 July 2006 reports: "GOLD COAST CITY COUNCIL is seeking proposals from industry to form an Alliance for delivery of the HINZE DAM Stage 3 Project. The dam augmentation will provide additional flood mitigation capacity and water supply yield for the Gold Coast region".

*If the Gold Coast Hinze Dam site proves to be in a continuing dry water supply catchment, Tweed Shire Council should consider completing the construction of the Clarrie Hall Dam upgrade by November 2008.*

*This is the time that Gold Coast Water strategic plan indicates that more costly Tugun desalinated water is required.*

*Increased Clarrie Hall Dam storage would provide for future Tweed water supply and also help the 'water starved' neighbouring region. Water sale revenue could help pay for increased Clarrie Hall Dam storage.*

*Other demand water saving strategies (rainwater tanks, water saving strategies) would assist in the deferment of other Tweed major water storage options (Byrrill Creek).*

*The Tweed Daily News reported on the 5 February 2003 that: "The Clarrie Hall Dam is hovering just above 35% at the moment".*

*This indicates that current higher levels of Clarrie Hall Dam water should not be taken for granted.*

**CONCLUSION.**

We acknowledge the importance for Tweed Shire Council to make a Tweed Shire Council Water & Wastewater Activity Management Plan.

Tweed Heads Environment Group considers that the Tweed Shire Council Water & Wastewater Activity Management Plan is seriously flawed with the inclusion of non-approved sewerage infrastructure, lack of commitment to reuse reclaimed water and immediate action to manage drinking water demand and collection.

The inclusion of non-approved sewerage infrastructure gives a sense of legitimacy to this appropriate but flawed plan

Please give consideration to our concerns and acknowledge receipt of this communication.

Yours sincerely

*Richard W Murray*

Richard W Murray  
Secretary

Cc Environmental Protection Authority  
Richard Hagley, Natural Resource Office (North Coast- Coast & Estuaries),  
Department of Infrastructure Planning and Natural Resources.  
Neville Newell MP