Gosford City Council

SUBMISSION TO

Independent Pricing and Regulatory Tribunal of New South Wales

Proposal for Water, Wastewater and Stormwater Prices

September 2008

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Executive summary

Gosford City Council makes this submission to the Independent Pricing and Regulatory Tribunal for the prices of its water, wastewater, stormwater and associated and ancillary services for the period 1 July 2009 to 30 June 2013. This submission has been based on a framework of cost recovery as required by the Intergovernmental Agreement.

The Central Coast has recently experienced its worst drought on record. Significantly reduced rainfall and streamflows have impacted on water supply storage levels which have been in decline since 1992. The Central Coast water supply is provided by Gosford City and Wyong Shire Councils, who are making significant capital investment in contingency works to mitigate drought impacts. To secure the Central Coast water supply, the Councils have developed a long term water planning strategy, WaterPlan 2050. This plan contains a combination of actions to augment the current water supply, enhance efficient water use and develop additional sources of water. These works have required significant levels of capital investment and as such put upward pressure on the price of water.

With drought contingency measures and planning for long term water security substantially complete, Council is now able to return its focus and resources to managing its wastewater system. Major capital investments are required to maintain and replace aging wastewater assets to ensure ongoing compliance with regulatory requirements.

Stormwater management is becoming increasingly complex as the traditional philosophy of getting stormwater off site as quickly as possible is replaced with water sensitive urban design principles. These changes to the expected level of service place upwards pressure on stormwater costs.

This pricing proposal is made against a backdrop of the Central Coast region experiencing its worst drought on record. Gosford City Council in partnership with Wyong Shire Council has undertaken, and continues to plan for, appropriate contingency works to mitigate the impact of any future drought, enhance the capacity for water supplies and provide for the efficient use of water on the Central Coast.

Council, recognising its responsibilities, is proposing prices for its water, wastewater and stormwater services that are:

Socially responsible -- the community recognises that Council, on behalf of the community has made significant capital investments in infrastructure that provides:

- high quality services,
- mitigates, as far as is practicable, the impact of any future drought, and
- provides for the economic development of the region.

Council recognises that the price increases required to fund these investments places additional burden on the community. To mitigate this impact, Council is proposing prices based upon achieving full cost recovery over an eight year, rather than a four year period, and has also reduced its equity return on investment, thus providing a benefit to the residents, being the equity owners.

Environmentally responsible -- Council's water business operates in an aesthetically attractive and environmentally diverse area. These benefits are highly valued by the community and the many visitors to the Central Coast. Council recognises its responsibility to maintain and enhance this environment not only for its own sake but also the important economic benefits that it brings to the community.

Financially responsible -- significant financial investment has been made by Council in the past few years in the water sector to mitigate the impact of any future drought on the Central Coast. This investment will continue over the next few years. Major investments are required in the immediate future in both replacing aging wastewater assets and enhancing the capability of stormwater assets to meet regulatory requirements. Council is committed to passing to the proposed Central Coast Water Corporation a financially sound business that can further develop the environmental and commercial opportunities for the benefit of the Central Coast community.

Council is proposing price increases that will increase the average annual bill for water services for a residential property by approximately eight percent per annum for four years. This price increase anticipates an easing of water restrictions with the attendant increase in water usage. Council is cognisant of the potential hardship that this may cause some families and is proposing to the Independent Pricing and Regulatory Tribunal the development of a state-based framework to address these issues.

1.0 INTRODUCTION

1.1. Background

The Independent Pricing and Regulatory Tribunal (IPART) is responsible for setting the maximum prices that can be charged by Gosford City Council (Council) for monopoly water, wastewater and stormwater services.

Council's current price determination will expire on 30 June 2009. IPART has commenced a price review in order to set prices for the next price period. This submission is provided to assist IPART make its next determination.

1.2. Council's water, wastewater and stormwater business

Gosford City Council is a water supply authority under the Water Management Act 2000. Council's water supply authority business (comprising the Water and Sewerage Directorate and stormwater services operated under City Services) provides services relating to the provision, operation and maintenance of water, wastewater and stormwater infrastructure for a population of approximately 158,400 (70,000 connected properties) within the Gosford local government area (LGA) on the NSW Central Coast. Council's area of operations is presented in Figure 1.

The Central Coast's water supply is provided by Gosford City Council and Wyong Shire Council (the Councils). Although the Councils operate as separate water supply authorities under the Water Management Act 2000, they have entered into an agreement for the joint provision, administration and management of the headworks components of the Central Coast water supply. These components are referred to as the joint water supply (JWS) and include major water storages, treatment facilities and transfer systems in both Councils' LGA. The JWS is administered by the Gosford-Wyong Council's Water Authority (GWCWA).

Water is drawn from Wyong River, Ourimbah Creek, Mooney Mooney Creek and Mangrove Creek and five groundwater aquifers. Mangrove Creek Dam (190,000 ML) is the major storage of Central Coast water, followed by Mardi Dam (7,400 ML) and Mooney Mooney Dam (4,600 ML). Each Council is responsible for managing the water reticulation network within its area of operations. Council's water supply system comprises one conventional treatment plant at Somersby and one membrane filtration plant at Woy Woy (total 145 ML/d), 34 service reservoirs (204 ML), 20 pumping stations, 154 km of trunk mains and 847 km of reticulation. The key components of the JWS headworks scheme are identified in Figure 1.

Council operates a wastewater system comprising 200 ML/d design treatment capacity, 184 pumping stations, 112 km of rising mains and 1,296 km of reticulation. Council operates two wastewater treatment plants providing secondary treatment before ocean outfall disposal. The location of these plants is included in Figure 1.

Council is responsible for the management of stormwater across an area of 1,020 km^2. The Gosford LGA includes 21 urban catchments and also some large rural catchments. Much of the area does not have a formalised stormwater system.

Council operates its business in accordance with regulatory requirements and aims to provide high quality services to its customers in a financially and environmentally sustainable manner.

Figure 1: Operating area locality diagram

1.3. Submission structure

Section 1 presents background information pertaining to Council's water business.

Section 2 presents a summary of Council's performance during the current (2006/07-2008/09) price period.

Section 3 presents Council's plans and proposed activities for the next price period.

Section 4 presents Council's revenue requirements for the next price period.

Section 5 presents Council's proposed pricing to recover the required revenues.

Section 6 discusses the impacts that the proposed pricing will have on customers and Council's financial sustainability.

All values are presented in $2008/09 unless otherwise specified.

2.0 COUNCIL'S PERFORMANCE IN THE 2006/07-2008/09 PRICE PERIOD

2.1. Water

During the current price period there has been continuing severe drought and considerable uncertainty over long term water security on the Central Coast. The following sections describe the impacts that reduced rainfall and streamflows have had on water storage levels and describes what the Councils have done, and are doing, to secure the water supplies for the residents and businesses on the Central Coast.

2.1.1 Rainfall, streamflow and storage levels

Since the early 1990s the Central Coast has experienced extreme drought with significantly reduced rainfall and streamflows in comparison to historical averages. Figure 2 presents the total streamflows of the water supply sources (Mangrove Creek, Mooney Mooney Creek, Ourimbah Creek and Wyong River) since 1885. It can be seen from Figure 2 that average streamflows from 1991 to 2006 were substantially below long term average streamflows.

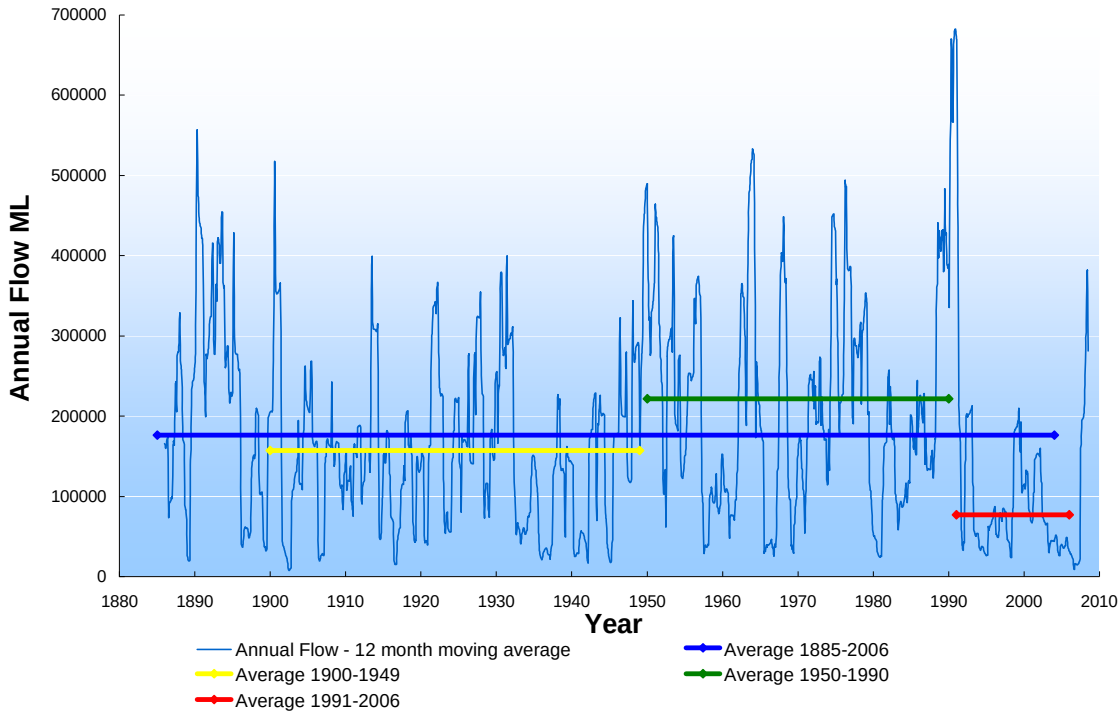

Figure 2: Central Coast water supply streamflows

Figure 3 presents the total system storage level since 1988 and illustrates the impacts that below average streamflows during recent years have had upon water supply

storage levels. Figure 3 illustrates the downward trend of water supply storage levels since 1992 to a level of 21 percent at the time of the Councils' last submission to IPART in 2005.

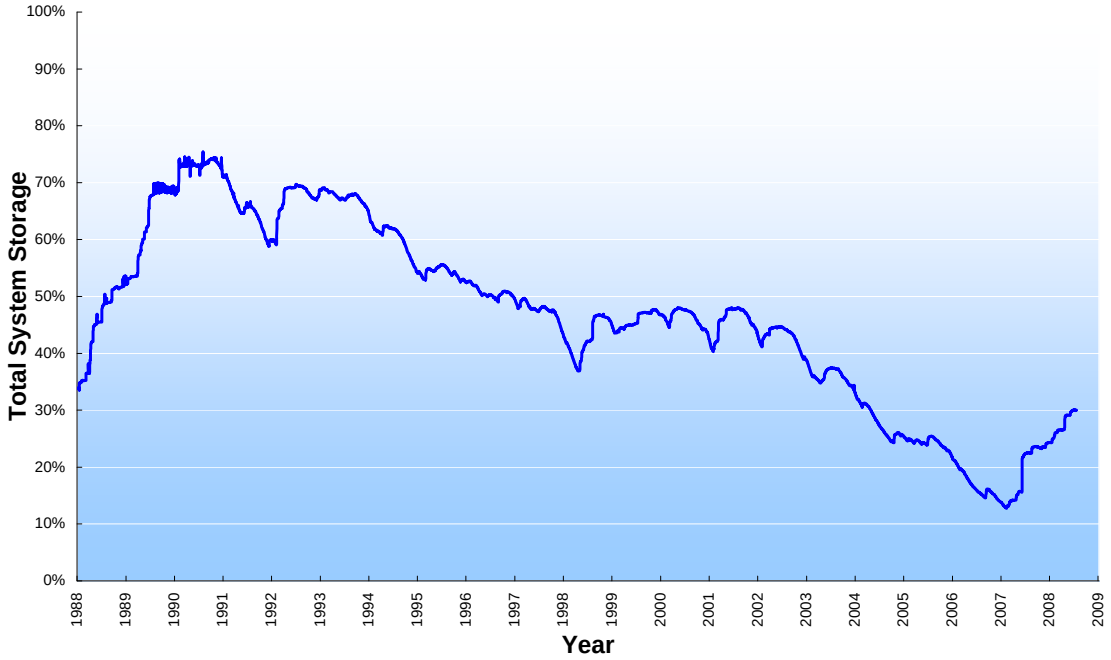

Figure 3: Total system storage since 1988

During the current price period storage levels continued to decline until February 2007 when total system storage reached a historical low of 12.4 percent. Since that time, the system has been slowly recovering with the exception of a steeper 6 percent increase associated with the June 2007 flood event. Figure 4 provides a summary of Mangrove Creek Dam rainfall and total system storage levels from 2005 and illustrates the impact of recent above average rainfall on total system storage levels. At 31 July 2008 total system storage was at 30.0 percent of total capacity.

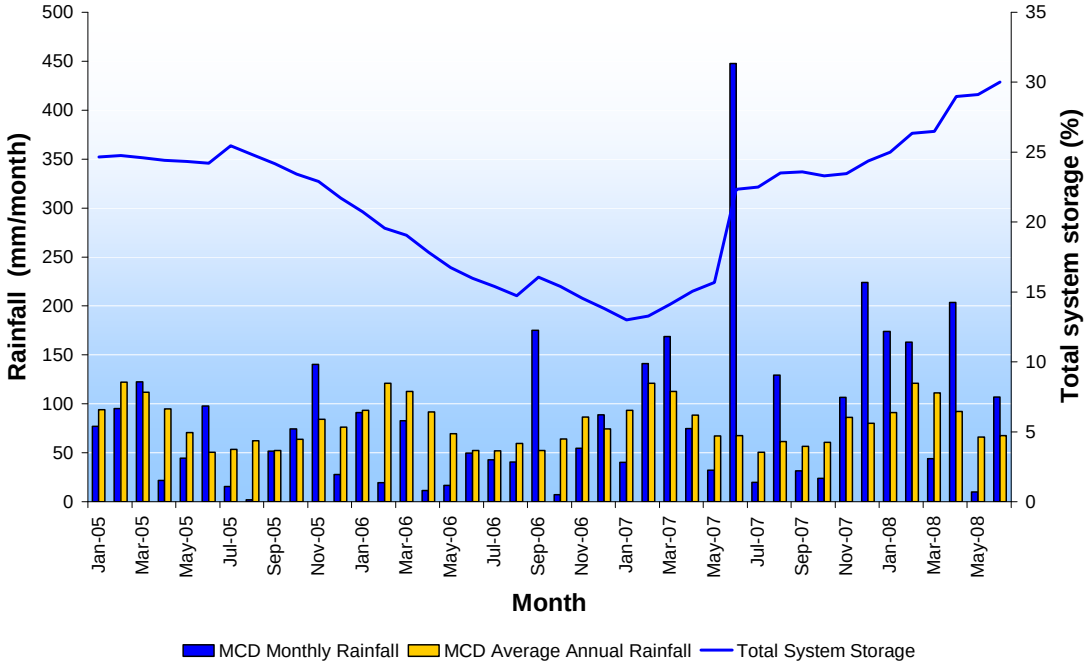

Figure 4: Total system storage and Mangrove Creek Dam monthly rainfall

2.1.2 Securing water supplies on the Central Coast

In response to the recent drought, the Councils, through the GWCWA, have implemented a multifaceted approach to manage and secure the Councils' water supplies. This includes:

- mandatory water usage restrictions,
- demand management initiatives,
- extensive community education,
- drought contingency measures,
- an Integrated Water Cycle Management (IWCM) strategy, and
- long term strategy for securing water supplies on the Central Coast (WaterPlan 2050).

In response to declining water storage levels, **water usage restrictions** have been in place on the Central Coast since 2002. A summary of the restriction regime since 2002 including restriction levels, target demand reduction and average actual demand reduction is provided in Table 1.

Table 1 illustrates the effectiveness of water restrictions in reducing average system demand, with actual demand reductions meeting or exceeding target reductions at each restriction level.

Table 1: Central Coast water restriction summary

Restriction level	Date introduced	Target demand reduction[1] (%)	Actual demand reduction[1] (%)
1	24 February 2002	8.0	11.0
2	17 May 2004	16.0	-2.0[2]
2A	1 August 2004	16.0	20.6
2B	4 December 2005	16.0	21.4
3	3 June 2006	30.0	29.8
4	1 October 2006	32.0	32.0
3	30 March 2008	30.0	35.0

[1] In comparison to unrestricted demand.

[2] Target demand reduction for level 2 restrictions was not achieved as limited outdoor watering was still permissible in an extremely dry period.

Best practice **demand management** is recognised as essential for the appropriate management of the water supply system and for the efficient use of water resources. The Councils have undertaken comprehensive demand analysis to understand and manage water consumption. Major demand management initiatives identified and implemented include financial rebates, a subsidised residential refit program, leakage detection and repair and an extensive public education campaign. A comprehensive summary of demand management initiatives is presented in Appendix A.

The Councils have also implemented a range of **drought contingency measures** to secure additional water. These measures include Ourimbah Creek bypass flow reduction, construction of a temporary weir on Porters Creek, temporary raising of Mangrove Creek Weir and the Lower Mangrove to Mooney Dam transfer system.

The Councils have each developed an **IWCM strategy** for their LGA within a Central Coast context. IWCM is considered best practice approach to local water utility strategic planning, is a requirement of the Department of Water and Energy (DWE) and forms part of a range of initiatives by the NSW Government to improve water management. Council's IWCM strategy includes a rigorous assessment of potable water supply demands for a range of integrated water cycle management scenarios, analysed the impacts of water conservation measures (Building Sustainability Index (BASIX), community education, fixture refits and rebates, high water user audits, and leakage reduction), and source substitution (stormwater harvesting, greywater recycling, recycled water use through a 'third pipe'). Council's IWCM strategy has been approved by DWE and its recommendations are being implemented.

To ensure that the growing population of the Central Coast has sufficient water to meet its needs for the next 50 years, the Councils, through the GWCWA, have developed

and adopted a long term water source planning strategy, **WaterPlan 2050**. WaterPlan 2050 is a dynamic plan which evaluates the short term actions required to manage the current drought and also the medium and longer term actions required to secure the water supply needs of the Central Coast. WaterPlan 2050 details the Councils' strategies for managing and securing water supplies and contains a combination of actions to further enhance the current water supply system, continue to use water as efficiently as possible and develop additional future sources of water.

WaterPlan 2050 has been prepared using the best available information, however, due to the nature of the inputs and predictions there is a level of inherent uncertainty in its findings. Key demand and supply risks facing the water supplies on the Central Coast, which could affect the timing of planned actions include:

- failure to achieve the predicted water savings through water conservation and recycling initiatives,
- growth exceeding population predictions,
- changes to water access licences (associated with NSW Government Water Sharing Plans) affecting the ability to extract from the surface water sources, and
- climate change reducing streamflows.

The impact of climate change upon the Central Coast's water supplies is discussed further in Section 3.5.2.

In selecting a preferred strategy to manage and secure water supplies, the two Councils have adopted an adaptive management approach. This enables the Councils to respond to the uncertainties and risks related to consumer water use behaviour, community acceptance, regulatory requirements, policy changes, climate change, technological innovation and future energy costs.

2.1.3 Water Savings Fund/Climate Change Fund

The Central Coast Water Savings Fund was established in 2006 in partnership with the NSW Department of Environment and Climate Change (DECC) and the Councils to encourage investment in water saving initiatives on the Central Coast. Gosford City Council and Wyong Shire Council have contributed $3.15 million and $2.85 million respectively to the Central Coast Water Savings Fund (now part of the Climate Change

Fund) during the current price period. These costs have been recovered from the Councils' customers through a water savings contribution per property.

To date, $4.9 million has been allocated from the Fund to 48 community projects, saving 687 ML of water a year. Grants from the Fund have contributed funding towards Council's recycled water schemes at Kincumber and Woy Woy and the Councils' residential washing machine rebate program during the 2007/08 financial year.

2.1.4 Drinking water quality

Fluoridation

Council, on the recommendation of the NSW Department of Health (DoH), introduced fluoride into the water supply to improve the community's dental health. The capital cost of fluoridating Council's water supply was funded by the NSW DoH. Fluoridation facilities at Council's two water treatment plants, Somersby and Woy Woy Peninsula, were commissioned in January 2008.

Water Quality 2010

Council began experiencing an elevated level of customer complaints relating to drinking water quality as shown in Figure 5. These water quality issues, predominately pertaining to discoloured water, were exacerbated by the drought as routine water main flushing activities were not undertaken in an effort to conserve water.

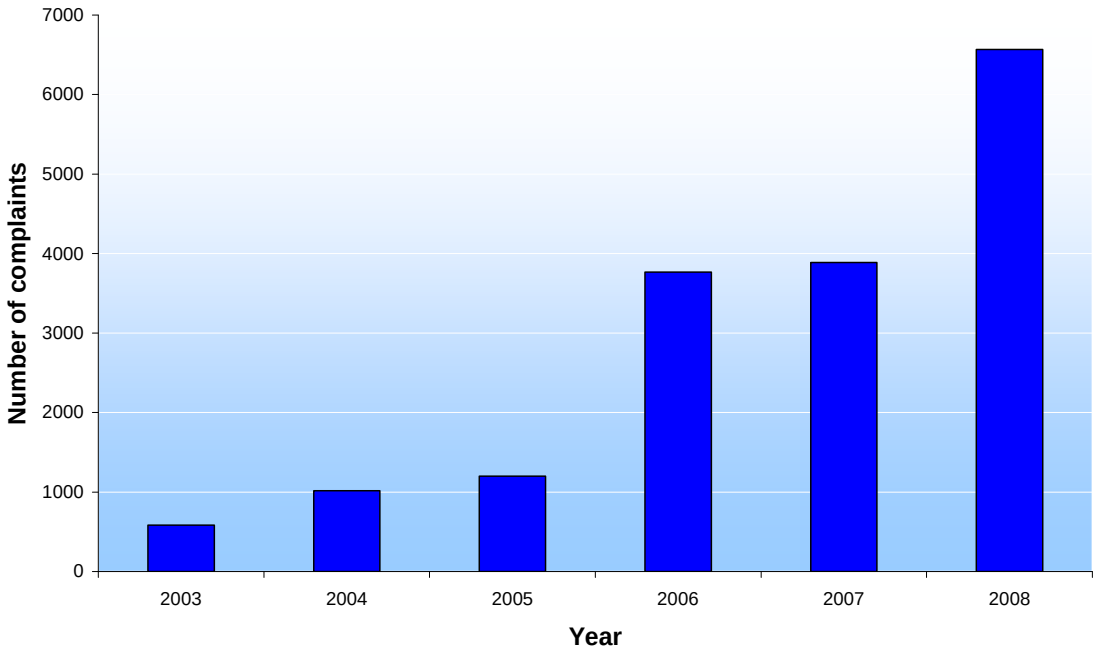

Figure 5: Water quality complaints

In 2007/08 Council had an average of 56.4 water quality complaints per 1,000 customers compared to an average of 3.9 per 1,000 customers for other utilities of similar size.

Water Quality 2010 is a comprehensive and integrated drinking water quality management program to address water quality from catchment to tap. Major components of Water Quality 2010 include water treatment process upgrades, reservoir improvements, new infrastructure to facilitate mains cleaning, water main refurbishment, replacement of unlined fittings and installation of system monitoring and analysis equipment. Water Quality 2010 is designed to enable Council to protect and manage drinking water supply systems for the future, reduce the number of discoloured water incidences, deal more efficiently with discoloured water events and improve and maintain customer service expectations.

Following an improvement in water storage levels, Council initiated an aggressive mains flushing program in December 2007, as part of Water Quality 2010. This program has resulted in a significant reduction in water quality complaints. To minimise impacts of these critical flushing activities on customers, this work was undertaken at night.

Framework for the Management of Drinking Water Quality

As part of the water quality initiative, Council is also implementing the Framework for the Management of Drinking Water Quality in accordance with the Australian Drinking Water Guidelines (ADWG) 2004. To date Council has formalised its commitment to water quality, completed a system assessment (including hazard identification and risk assessment) and identified preventative measures and critical control points. Implementation of the Framework will enable Council to manage the quality of its water supplies in a systematic and strategic manner, ensuring appropriate allocation and prioritisation of resources.

2.1.5 Service outcomes and customer satisfaction

Council undertakes periodic surveys to establish community satisfaction levels. Key findings pertaining to Council's water service from recent community surveys are discussed below.

The community considers the "quality of water supply", "reliability of water supply" and "water conservation initiatives" to be the three most important services provided by Council. The level of importance assigned to these three services has increased

significantly from 2004, however resident satisfaction with these services has declined[1].

Council's water conservation, education and communication campaign has been successful in raising community awareness and influencing water use behaviour with approximately 95 percent of surveyed residents recognising the seriousness of the water supply situation on the Central Coast and believing that saving water should remain a high priority. During the recent drought a large proportion of the Central Coast community has taken an interest in water supply storage levels with over 95 percent of survey respondents indicating they are still committed to saving water in their home or garden. The majority (over 90 percent) of surveyed customers were aware of the financial rebates that Council provides to reduce the costs of water saving devices and appliances.[2]

The quality of drinking water provided by Council was the second most frequently cited negative impact upon customers (after traffic), with 35 percent of respondents stating that drinking water quality had negatively affected them during the 12 months preceding the survey[3]. Customer dissatisfaction with Council's water quality is also evident in the 2006/07 Urban Water Utilities National Performance Report with Council reporting 56.4 water quality complaints (per 1,000 customers) compared to an average of 3.9 for other utilities in the 50,000-100,000 properties sector[4].

Conversely, in 2006/07 Council had the lowest average duration of unplanned water supply interruptions with 63 minutes compared to the sector average of 98 minutes[4].

Performance against the water output measures prescribed by IPART in 2006 is presented in Appendix B.

2.1.6 Capital expenditure

IPART, in its 2006 price determination, allowed recovery of the required revenue for the forecast water capital expenditure over the current price period. The forecast capital expenditure comprises the capital costs incurred directly by Council and 50 percent of the capital costs incurred through the JWS. Figure 6 compares IPART determined levels of capital expenditure for 2006/07 to 2008/09 with Council's actual and budgeted

[1] Hunter Valley Research Foundation 2006 *Survey of residents*
[2] Gosford City Council 2008 *Australia Day Survey*
[3] Central Coast Research Foundation 2008 *Quality of life in the Central Coast - A community survey of Central Coast residents 2007*, pp.111
[4] Water Services Association of Australia, National Water Commission and NWI Partners 2008 *Urban Water Utilities National Performance Report 2006/07*

capital expenditure inclusive of Council's share of JWS capital expenditures and net of contributions.

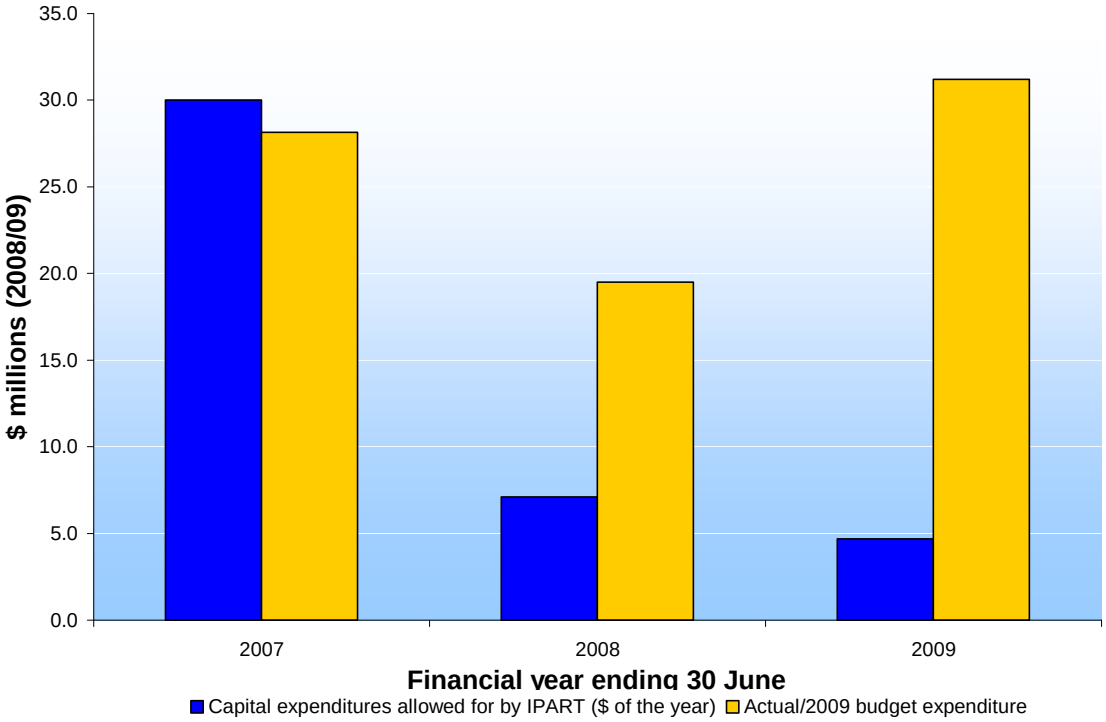

Figure 6: Comparison of actual (budget for 2009) water capital expenditures against the allowance in the 2006 price determination

Major water capital works undertaken in the current price period include:

- *Groundwater contingency scheme*

  The scheme provides an approximate yield of 8ML/d from seven borefields across the Central Coast (Mangrove Weir, Ourimbah, Mardi, Braithwaite Park, Somersby, Narara and Woy Woy). The scheme involved the construction of substantial reticulation infrastructure and an advanced water treatment facility providing treated groundwater to the Woy Woy Peninsula area (capacity of 5ML/d). The scheme also included extensive environmental monitoring of aquifers within the Terrigal hard rock formation, and shallow alluvium aquifers within the Woy Woy-Umina Peninsula to ensure overall sustainability of the groundwater resources. The Ourimbah, Mangrove Weir, Narara and Woy Woy borefields are presently operating under an extended Test Pump Licence from DWE pending an annual water supply allocation. The Councils are continuing to monitor groundwater across the region.

- *Hunter Water transfer system*

  The Hunter Water transfer system is a component of WaterPlan 2050 to increase drought security by providing infrastructure to transfer water from Hunter Water at an average rate of 33ML/d. This component of WaterPlan 2050 provides the Central Coast with increased drought security and additional yield to cater for growth.

- *Lower Mangrove Weir to Mooney Dam transfer system*

  The Councils have constructed a new spur pipeline off the existing Lower Mangrove Weir to Somersby pipeline, which enables additional water to be stored in Mooney Mooney Dam. Such transfers will occur when the volume of water behind the weir is greater than the region's demand and there is capacity in Mooney Mooney Dam. The $3 million pipeline is capable of providing an additional 1,400 ML of drinking water per year.

- *Lower Wyong transfer system upgrade*

  This project involved duplication of the existing rising main from the Lower Wyong River weir to Mardi Dam, an extension to the rising main around Mardi Dam and the augmentation of the suction main at the existing pump station. All works have been completed and commissioned. The transfer system enables a greater proportion of high flows from the Wyong River to be captured (from 72ML/d to 125ML/d) thus increasing system yield.

- *Mardi Dam transfer system*

  This project involves the construction of a new outlet tower at Mardi Dam, together with a transfer pipeline and pumping station to convey water to Mardi water treatment plant and to the Mardi to Mangrove transfer system. Planning, design and tendering for this project is complete with construction expected to be completed in late 2009.

- *Preconstruction activities for Mardi to Mangrove transfer system*

  The Mardi to Mangrove transfer system is a key part of the long term water management strategy outlined in WaterPlan 2050. The transfer system will enable additional water to be extracted from Wyong River and Ourimbah Creek during medium to high flows, and transfer the excess water to Mangrove Creek Dam, via Mardi Dam. The project includes a 320ML/d pumping station to lift water from Wyong River to Mardi Dam, a 2.6km rising main, a 120ML/d pumping station to lift water from Mardi Dam to Mangrove Creek Dam, a 20km

rising main and Mangrove Creek Dam inlet/outlet upgrades. The Councils have completed project investigation works and concept design.

- *Preconstruction activities for desalination (not progressing to construction)*
  The Councils completed the environmental assessment and concept design activities required to support a development application for a 20ML/d seawater reverse osmosis desalination plant at Toukley. Although this project is not currently progressing to construction, WaterPlan 2050 retains desalination as an option for potential supply during any future periods of prolonged drought or significant demand increases.

The main areas in which Council's water capital expenditure differs from that anticipated in the last submission are:

- increased expenditure on the groundwater contingency scheme due to greater exploratory drilling requirements, deeper drilling, environmental monitoring required by DWE and 'fast tracking' of this critical drought contingency project,
- completion of Mooney Dam spur main which was not forecast at the time of the last submission,
- increased expenditure on the Lower Wyong River Transfer System upgrade due to the requirement for an unanticipated power supply upgrade and construction difficulties within the road reserve,
- increased expenditure on the Hunter Water transfer system to deliver a greater transfer capacity of 33ML/d,
- deferral of the Mooney Mooney transfer system upgrade (refer to Appendix B),
- increased and delayed expenditure on the Mardi Dam transfer system due to substantially increased scope to cater for flows to both the Mardi Water treatment plant and the Mardi to Mangrove transfer pumping station,
- early commencement of Mardi to Mangrove transfer system preconstruction activities,
- deferral of the Mardi Dam wall raising as other projects being undertaken increase system yield more cost effectively (refer to Appendix B),
- delayed delivery of the Mardi High Lift pumping station and associated works due to modification of scope to achieve cost savings and additional operating benefits,
- additional expenditure on desalination preconstruction works,

- expansion of Council's water main renewal program in response to the continued high level of water main failures partially attributable to drought impacts on soil stability, and
- treatment process and reservoir modifications to improve water quality (Water Quality 2010).

2.1.7 Operating expenditure

IPART, in its 2006 price determination, set a level of operating expenditure that it expected would be required over the current price period. These operating costs were exclusive of Council's contribution to the NSW Water Savings Fund/Climate Change Fund of $1.05 million per year. The Council's water service over the current price period has been provided against a backdrop of the worst drought in its history. This has necessitated the provision of services that were unanticipated when the previous pricing submission was made. Figure 7 compares IPART determined levels of water operating expenditure for 2006/07 to 2008/09 with Council's actual and budgeted expenditure, net of contributions.

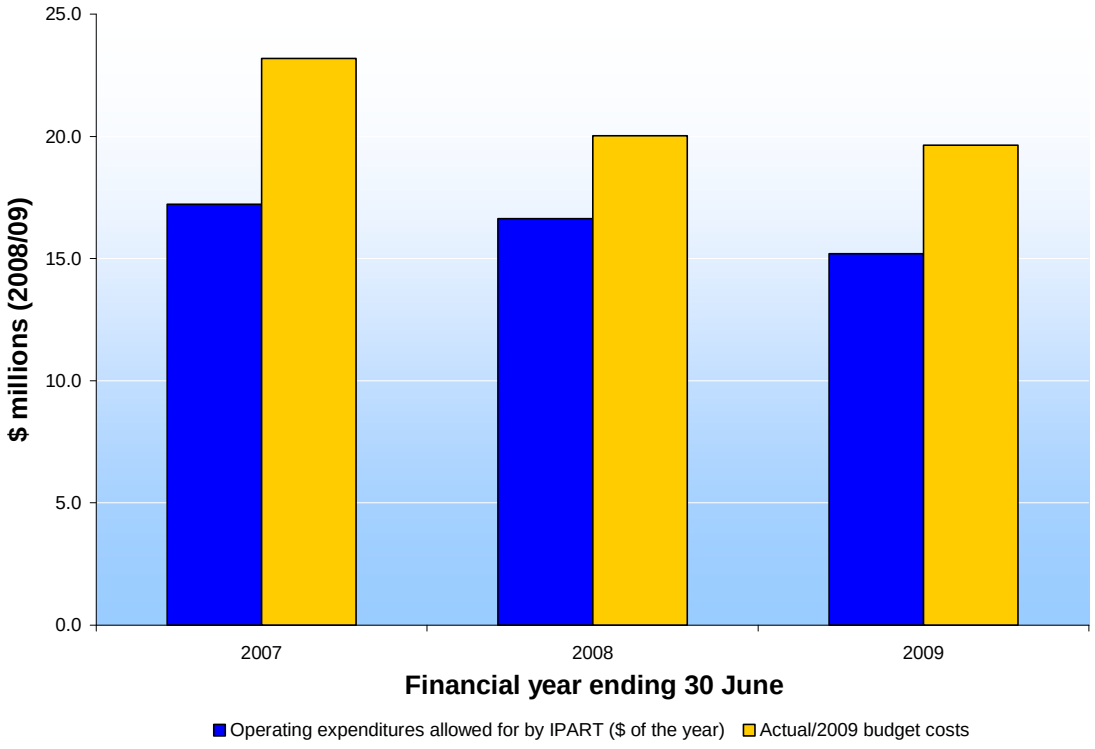

Figure 7: Comparison of actual (budget for 2009) water operating expenditures against the allowance in the 2006 price determination

The main areas in which Council's operating expenditure differs from that anticipated in the last submission are additional costs associated with the drought, increased

electricity prices, purchases of water from Hunter Water, elevated response requirements pertaining to water quality complaints, and increased pumping of groundwater. The regulatory requirements associated with fluoridating the water supply have significantly increased water treatment plant labour and chemical costs.

The majority of increases in water operating expenditure during the current price period relate to Council's drought management activities as described in Section 2.1.2. The total identifiable cost of these initiatives over the current price period exceeds $5 million. Without the additional expenditure attributable to unforeseen drought mitigation activities, Council's operating expenditure is commensurate with IPART's determined water operating expenditure.

2.2. Wastewater

During the current price period, Council has expended considerable time and resources in managing the drought and securing water supplies on the Central Coast. While Council has continued to provide high quality wastewater services, as an organisation with limited staff resources, the drought has impacted upon the delivery of some proposed wastewater projects.

Water usage restrictions during the price period have reduced the amount of wastewater entering Council's treatment system.

Wastewater achievements in the current period include completion of the Mooney Mooney Cheero Point wastewater scheme (early 2009), odour management investigations, sewage pump station (SPS) component upgrades, commencement of major sewage treatment plant (STP) upgrades and development of a new procedure for responding to and reporting wastewater overflows.

The Mooney Mooney Cheero Point wastewater scheme (formally referred to as Priority Sewerage Program (PSP) - Stage 1 (Hawkesbury Villages)) will provide wastewater services to the 'unsewered' villages adjacent to the Hawkesbury River. The system will provide environmental and health improvements and has been partly funded by the NSW Government through the Priority Sewerage Program ($0.747 million) and the Country Towns Water Supply & Sewerage Program ($3.93 million).

2.2.1 Service outcomes and customer satisfaction

Wastewater services are one of the Council provided services with which customers indicate they are most satisfied[1].

The 2006/07 Urban Water Utilities National Performance Report indicates that Council has a higher number of wastewater main breaks and chokes (46 per 100km of main, compared to an average of 34 per 100km of main) and wastewater overflows to the environment (48 per 100km of main, compared to an average of 18 per 100km of main) than other utilities of comparable size[4].

The 2006/07 Urban Water Utilities National Performance Report also indicates an elevated level of odour complaints pertaining to Council's wastewater system[4]. DECC has recently included a pollution reduction program (PRP) in Council's Environment Protection Licence (EPL) for improvement of odour management at Kincumber STP.

Performance against the wastewater output measures prescribed by IPART in 2006 is presented in Appendix B.

2.2.2 Capital expenditure

IPART, in its 2006 price determination, allowed recovery of the required revenue for the forecast wastewater capital expenditure over the current price period. Figure 8 compares IPART determined levels of wastewater capital expenditure for 2006/07 to 2008/09 with Council's actual and budgeted expenditure, net of contributions.

The main areas in which Council's wastewater capital expenditure differs from that anticipated in the last submission include:

- delayed expenditure on North Avoca scheme due to modification of scope (works integrated into larger Coastal Carrier System upgrade) to achieve cost savings and additional operating benefits,
- delayed expenditure on the Gosford CBD upgrade as a result of changes to the Local Environment Plan (LEP) by the NSW Minister for Planning,
- increased and delayed expenditure on the provision of wastewater services to the PSP areas of Mooney Mooney and Cheero Point due to delayed funding and regulatory approvals, extensive stakeholder negotiation requirements and finalisation of the funding arrangement with Sydney Water Corporation (SWC) and Department of Aging, Disability and Home Care (DADHC)), and

- delayed expenditure on STP upgrades due to integration with the major STP upgrade program to achieve cost savings and additional operating benefits.

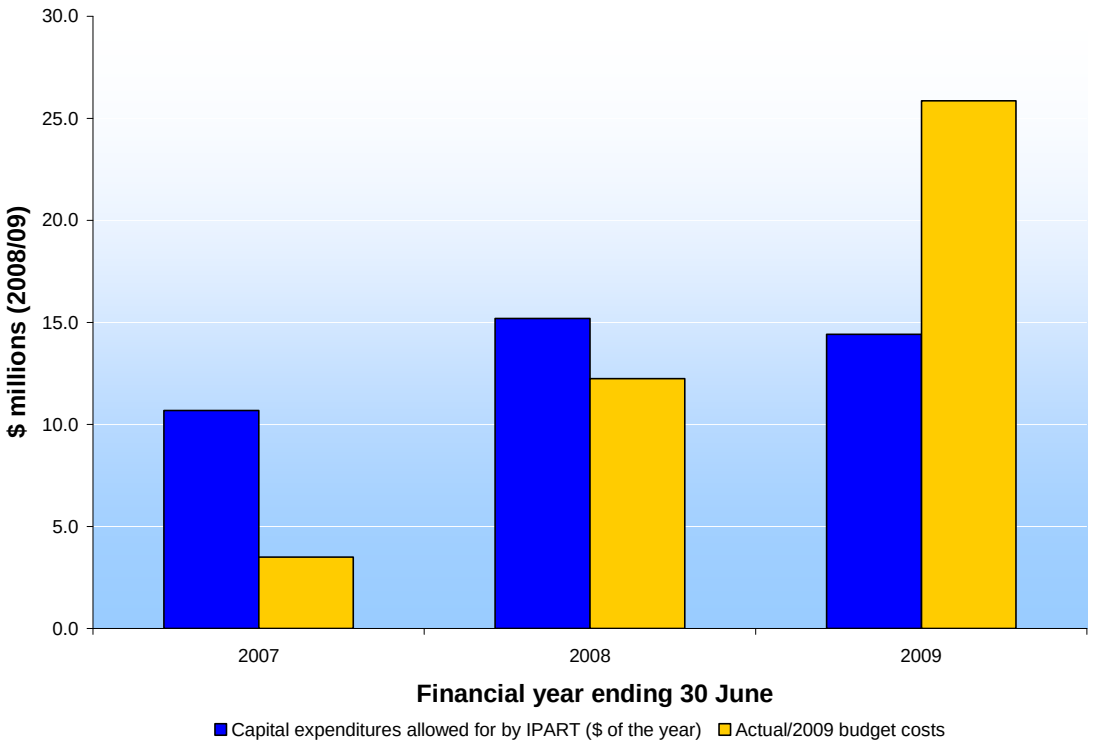

Figure 8: Comparison of actual (budget for 2009) wastewater capital expenditures against the allowance in the 2006 price determination

2.2.3 Operating expenditure

IPART, in its 2006 price determination, set a level of wastewater operating expenditure that it expected would be required over the current price period. Figure 9 compares IPART determined levels of wastewater operating expenditure for 2006/07 to 2008/09 with Council's actual and budgeted expenditure, net of contributions.

The main areas in which Council's wastewater operating expenditure differs from that anticipated in the last submission include:

- responding to an elevated number of wastewater main breaks and chokes,
- commencement of the enhanced wastewater main cleaning program,
- inflow and infiltration identification program,
- enhance closed circuit television (CCTV) inspection program for sewer main condition assessment,
- backlog sludge management costs to reduce site holdings,

- responding to an elevated number of wastewater odour complaints, and
- commencement of extensive odour reduction investigations (both short and long term).

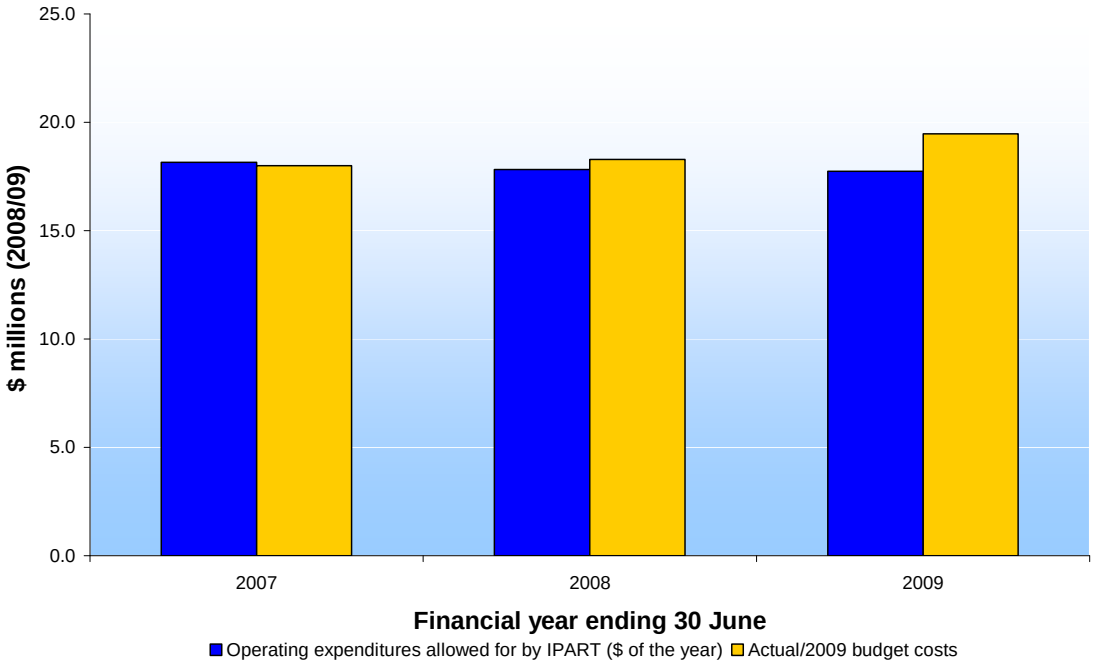

Figure 9: Comparison of actual (budget for 2009) wastewater operating expenditures against the allowance in the 2006 price determination

Also, a proportion of the increased operating expenditure is attributed to emergency works during and after the June 2007 long weekend storm (a declared natural disaster). Council, as a water supply authority, was not able to obtain any emergency funding.

2.3. Stormwater

At the 2006 determination, IPART introduced a regulated stormwater charge. This charge was intended to recover the cost of providing stormwater services in the Gosford LGA. The stormwater charge was set at $55 and increased to $60 in 2008/09. The stormwater charge has enabled recovery of the IPART determined revenue needs in each year of the current price period. As IPART set the stormwater charge significantly below the price requested by Council, the charge has not been sufficient to recover all of Council's stormwater costs.

During the current price period, Council has established a data capture project to identify major stormwater assets and include these in Council's Geographic Information

System (GIS). To date approximately 60 percent of Council's stormwater assets are included in Council's GIS. As a preliminary step in stormwater asset management, an age based condition index has been allocated to the assets included in Council's GIS.

The key driver of Council's stormwater capital works program is the provision of assets to areas with substandard stormwater systems in order to reduce flooding risk. Council has a backlog of stormwater infrastructure requirements currently estimated at $170 million (based on a list of capital works projects that have been investigated and costed).

2.3.1 Service outcomes and customer satisfaction

Council's stormwater assets provide a service to manage stormwater and reduce flooding when it rains. However, the needs and priorities of the community have changed from the traditional philosophy of getting stormwater off site as quickly as possible. Stormwater assets must now deliver a broader suite of services, including pollution control, river health, stormwater harvesting, and urban amenity, making the process of stormwater asset management more complicated than in previous decades. Accordingly, the community's desired level of service is changing and becoming multi-faceted and increasing the costs of providing the service.

In many areas the desired level of service is not yet being provided. Significant areas have aging and undersized stormwater assets and many areas do not have a formalised stormwater system. Higher density infill development is placing increasing pressure on existing stormwater systems and natural watercourses. Maintenance and replacement of stormwater infrastructure is not keeping up with the rate of deterioration.

Conversely, Council has good knowledge of the extent of the flood problem. Extensive flooding investigations have been undertaken throughout Council's area of operations.

2.3.2 Capital expenditure

IPART, in its 2006 price determination, allowed recovery of the required revenue for the forecast stormwater capital expenditure over the current price period. Figure 10 compares IPART determined levels of stormwater capital expenditure for 2006/07 to 2008/09 with Council's actual and budgeted expenditure, net of contributions.

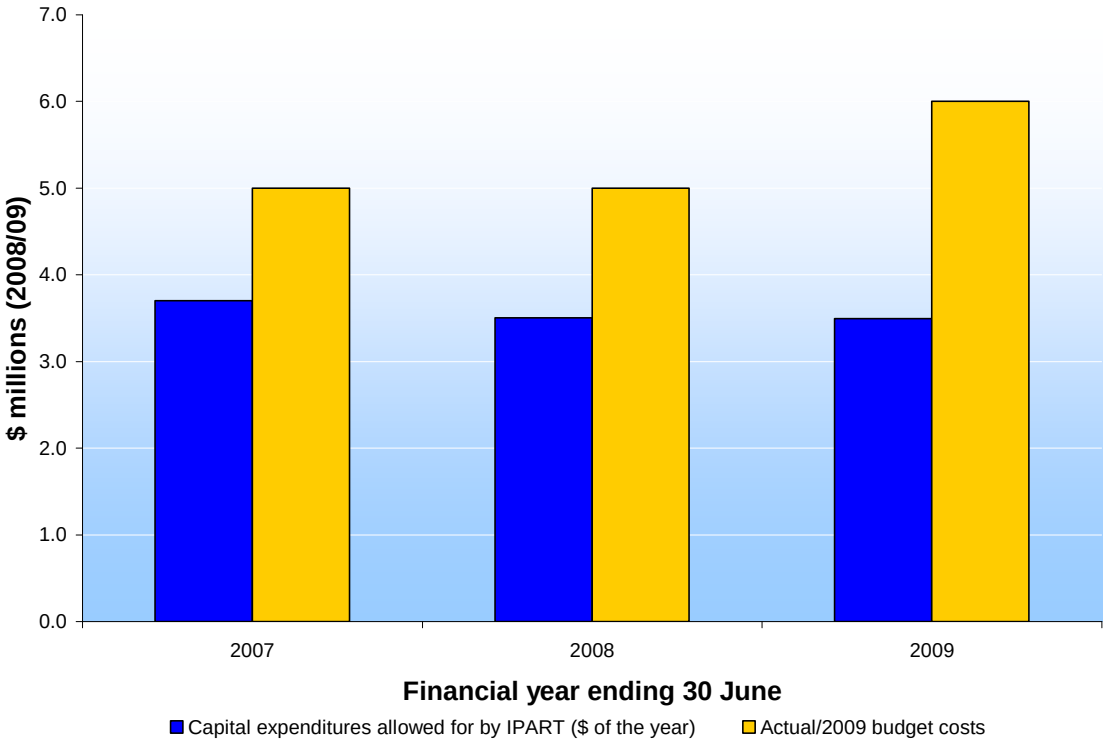

Figure 10: Comparison of actual (budget for 2009) stormwater capital expenditures against the allowance in the 2006 price determination

To take advantage of available Government grant funding, stormwater capital expenditure is greater than that anticipated at the time of the last submission.

2.3.3 Operating expenditure

IPART, in its 2006 price determination, set a level of operating expenditure that it expected it would be required over the current price period. Figure 11 compares IPART determined levels of stormwater operating expenditure for 2006/07 to 2008/09 with Council's actual and budgeted expenditure, net of contributions.

Council's stormwater operating expenditure is greater than the level set by IPART in the 2006 determination due to increased maintenance associated with the shift towards water sensitive urban design and increased tipping costs.

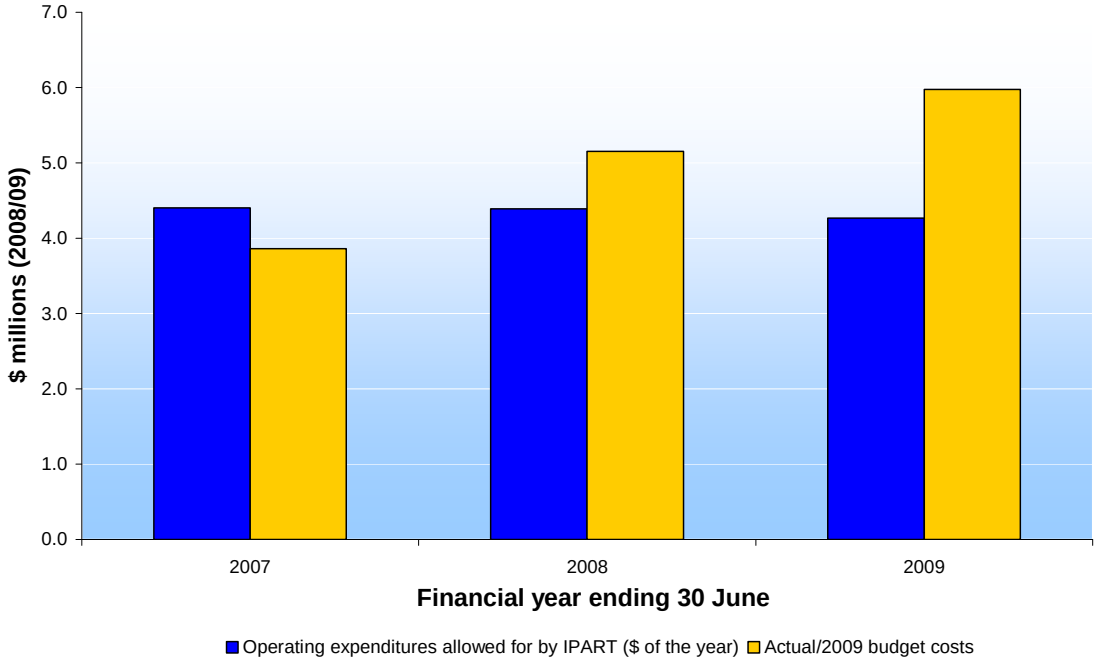

Figure 11: Comparison of actual (budget for 2009) stormwater operating expenditures against the allowance in the 2006 price determination

2.4. Recycled water

Council has upgraded the Kincumber and Woy Woy STPs to provide tertiary treated and disinfected effluent (recycled water) for tanker filling and reticulated customers including sports fields and concrete batching plant facilities. Council's recycled water scheme is capable of replacing up to 85ML of potable water per annum. Council has completed the validation monitoring and has requested full scheme approval from DWE.

Internal recycling systems at the STPs have been upgraded to provide chlorination disinfection to increase internal use of recycled water.

Recycled water is to be charged for in accordance with IPART's pricing principles for voluntary recycled water customers[5]. As the costs of and revenues from recycled water will be ring fenced, Council does not seek to recover the cost of recycled water from its wider customer base.

2.5. Asset management

Council is committed to the strategic management of its assets to achieve the following objectives:

[5] Independent Pricing and Regulatory Tribunal 2006 *Pricing arrangements for recycled water and sewer mining - Sydney Water Corporation, Hunter Water Corporation, Gosford City and Wyong Shire Council*

- maintenance of asset condition to support ongoing delivery of service levels in accordance with operating requirements,
- ensuring compliance with all relevant environmental and health regulations,
- minimal life cycle costs,
- efficient use of resources,
- appropriate management of business risk, and
- ensuring long term sustainability and viability.

To achieve these objectives Council has developed an Integrated Total Asset Management system. The system is comprised of four key components:

- asset management - how Council looks after its assets, both on a day-to-day basis (operations) and in the medium to long term (strategic planning),
- system integration - to ensure inputs and outputs align with strategic goals and objectives,
- information system development - to promote knowledge creation and support management processes including productivity and cost reduction activities, and
- management framework - to provide the policy, processes and methodologies to ensure a structured, systematic and effective approach to asset management.

To enhance its asset management capabilities, Council has acquired the Hansen 8 Enterprise Asset Management System. This system is widely acknowledged as providing the tools for best practice efficient and effective asset management. Once fully implemented and operating, Hansen will assist with the identification of assets, works management planning, inspection and maintenance schedules, performance management reporting and financial management of valuations in keeping with legislative requirements. To date approximately 228,000 water and wastewater assets have been identified, loaded and verified. Significant integration work has also commenced linking the Hansen system to Council's other corporate information systems. Intensive data capture and system integration will continue for the next 18 months with further system enhancement and integration progressing over future years. Council has also substantially completed the updating of water and wastewater information into Council's GIS.

2.6. Financial outcomes

During the current price period Council's financial position has been significantly impacted upon by:

- increased costs associated with planning for future long term water security,
- increased costs associated with the implementation of drought management strategies,
- reduced income from water sales as a result of water restrictions.

These impacts are discussed in the following sections.

2.6.1 Revenue requirements

Council has made significant additional investments and incurred increased operating costs in the current price period, particularly due to the drought. The prices determined by IPART in 2006 significantly under-recover Council's actual revenue requirements. Table 2 presents the differences between the determined revenue requirements and Council's actual/budgeted revenue requirements.

Table 2: Comparison of determined and actual/budgeted revenue requirements

Service	Revenue requirements as per 2006 price determination	Revenue requirements using the actual/budgeted[1] expenditures	Shortfall	
	$m (nominal)	*$m (nominal)*	*$m*	*%*
Water	80.5	110.0	30.5	38
Wastewater	80.4	103.1	22.7	28
Stormwater	14.5	15.3	0.8	6
Total	**175.4**	**228.4**	**54.0**	**31**

[1] Budgeted figures used for 2008/09.

2.6.2 Revenue collected

At the time of the last price review, IPART predicted water sales based on a level 2 restriction scenario (level 2 restrictions were in place at the time). This was in contrast to Council's forecasts which were based on the assumption that level 3 water restrictions would be in place until 2008/09. It is now evident that stringent water usage restrictions in response to continuing/worsening drought resulted in actual demands lower than the IPART adopted forecasts. Table 3 presents the revenue impact due to IPART's overestimation of water sales during the price period.

Table 3: Comparison of IPART determined and actual water sales

		Financial year ending 30 June			Total
		2007	2008	2009	
IPART adopted water sales	ML	13,637	13,782	13,847	41,266
Actual water sales	ML	12,201	11,151	11,152[1]	34,504
Difference	ML	1,436	2,631	2,695	7,62
Difference	%	10.5	19.1	19.5	-
Water usage charge	$/kL	1.12	1.36	1.67	-
Resulting unrealised revenue[2]	$million[3]	1.61	3.58	4.50	9.69

[1]Forecast by Council.
[2]From water usage charges only. Council has additional unrealised revenue from non-residential wastewater usage charges (which are calculated using metered water sales).
[3] Nominal dollars.

2.6.3 Pricing impacts upon customers

During the current determination period, eight applications have been made to Council's Hardship Committee in relation to water and wastewater bills. The majority of these applications sought for the interest incurred due to non-payment of overdue accounts to be waived and did not seek a reduction in the actual bill.

3.0 COUNCIL'S BUSINESS PLANS FOR THE NEXT PRICE PERIOD

3.1. Length of the price period

Council supports IPART's suggestion for a four year price determination from 2009/10 to 2012/13.

3.2. Water

During recent months, water supply storage levels on the Central Coast have risen as a result of above average rainfall and streamflows, however total system storage still remains low. As of 8 September 2008 the system was at 31.3 percent of capacity. There is still significant uncertainty regarding future weather and climatic conditions on the Central Coast.

The percentage of NSW in drought increased in July 2008, indicating that recent rainfall cannot be assumed to continue. In managing future climate and weather uncertainty, Council recognises that it cannot be dependent on rainfall/streamflow levels returning to long term average levels. The water supply can no longer be managed as 'business as usual'. Council sees managing the demand/supply balance as a continuing key priority in the next price period.

3.2.1 JWS capital expenditure

In the next price period, the Councils will be completing major capital projects to secure water supplies on the Central Coast in accordance with WaterPlan 2050. These JWS projects include:

- *Mardi to Mangrove transfer system*
  A key part of the WaterPlan 2050 strategy, this project will enable the transfer of water from Mardi Dam to Mangrove Creek Dam under favourable conditions, significantly increasing system yield. This project received funding approval for $80.3M from the Federal Government.

- *Mardi suite of works*
  Includes the Mardi Dam Transfer System, Mardi High Lift Pump Station, Mardi Spillway and Bridge and the high voltage electrical ring main for Mardi infrastructure, which have been grouped together in a single construction contract package. The Mardi suite of works will increase pumping capacity,

enable greater water transfers between Gosford and Wyong supply systems, meet NSW Dam Safety Committee requirements and provide sufficient electricity for operation of the upgraded pumps.

- *Mardi Dam pre-treatment*

  The construction of a Mardi Dam pre-treatment facility has been proposed to prevent water quality problems in Mardi Dam and Mangrove Creek Dam associated with the pumping of water from Wyong River during high flow conditions when water quality is not of a suitable standard. The pumping of more water during high flows is required to comply with the anticipated new water sharing plan rules for Wyong River currently being developed by DWE. The existing Mardi water treatment plant is based on a direct filtration process, which relies on the source water to be fairly high quality. The existing plant is not capable of meeting the regulatory or aesthetic targets without pre-treatment.

- *Stormwater harvesting at Porters Creek*

  This project involves the diversion of excess stormwater generated by urban development to the Wyong River. The scheme collects, treats and transfers runoff from urban catchments to the Wyong River. The scheme diverts increased runoff due to urban development around the sensitive Porters Creek Wetland to provide the required environmental flows at Lower Wyong weir. The scheme will enable the harvesting of an additional 5,400 ML/y from the Wyong River.

These JWS projects will predominantly be undertaken in the Wyong LGA and managed by Wyong Shire Council. Council's share of the JWS capital expenditure over the next price period is included Table 4.

3.2.2 Council’s capital expenditure

Council will be undertaking significant water capital works within its area of operations. Major projects include:

- *Water main renewal program*

  Replacement of aging assets to improve system reliability, reduce leakage and prevent asset failure.

- *Gosford CBD development servicing plan*
  This plan includes upgrades to replace aging water assets and accommodate the expected increased populations associated with redevelopment of Gosford CBD in accordance with the Gosford City Centre Local Environment Plan (LEP).

- *Gosford Water Factory*
  This project will provide an advanced water recycling facility to facilitate intensive community and stakeholder awareness of the principles of water conservation, integrated water cycle management and long term water supply options in WaterPlan 2050, such as water recycling and desalinisation.

- *Woy Woy water recycling project*
  There is an estimated 570ML/y of non-drinking demand for recycled water on the Woy Woy Peninsula. The demand includes selected end uses such as a golf course, sports field, schools, retirement villages, bowling greens, light industry and other open space irrigation. A feasibility study has also identified the potential for a seawater barrier (aquifer recharge) project to protect the freshwater aquifer on the Peninsula salt water intrusion. Council is currently preparing a conceptual design for this project.

- *Water Quality 2010*
  Improving the reliability of drinking water quality through completion of water treatment process upgrades, reservoir improvements, water mains refurbishment and replacement of unlined fittings.

Council's forecast water capital expenditure program includes the direct capital costs associated with Council's water reticulation network and also 50 percent of the JWS capital costs. Council's water capital expenditure (including 50 percent of JWS expenditure) over the next price period is presented in Table 4.

Table 4: Forecast water capital expenditure ($million, real 2008/09)

	2009/10	2010/11	2011/12	2102/13	Total
Forecast capital expenditures	37.7	3.4	6.0	16.2	63.3

JWS projects account for 58% of the capital expenditure in Table 4.

An analysis of the water capital costs by driver of expenditure is presented in Figure 12.

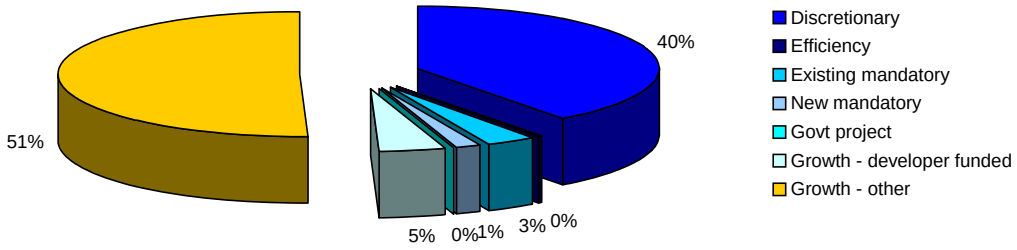

Figure 12: Forecast water capital expenditure for the period 1 July 2009 to 30 June 2013 by driver

The water capital expenditure program has been designed to meet customer, regulatory and environmental requirements and will maintain existing assets, secure water supplies and improve and maintain drinking water quality. Levels of service have been developed with consideration to service outcomes and customer satisfaction presented in Section 2.1.5.

3.2.3 Operating expenditure

Operating costs for water include the operating costs directly incurred relating to Council's own reticulation assets and those incurred on assets managed under the JWS agreement of which Council pays 50 percent. 36 percent of Council's water operating expenditure is for JWS assets.

Council has critically reviewed its water operating costs. As part this review Council is proposing an efficiency saving of 0.5 percent in year one of the price period, 0.5 percent in year two and a further 0.25 percent in year three. During the current year Council will identify where such efficiencies can be achieved.

Council's forecast water operating expenditure (including 50 percent of JWS expenditure) over the next price period is presented in Table 5.

Table 5: Forecast water operating expenditure ($million, real 2008/09)

	2009/10	2010/11	2011/12	2102/13	Total
Forecast operating expenditure	19.6	20.1	19.75	18.05	77.5
Efficiency savings	(0.1)	(0.2)	(0.25)	(0.25)	0.8
Net forecast operating costs	**19.5**	**19.9**	**19.5**	**17.8**	**76.7**

Forecast water operating costs are reflective of the new water constrained paradigm in which Council's water business now operates and also the requirement to operate major new assets currently being constructed.

The main drivers behind elevated levels of water operating expenditure are:

- increased expenditure on demand management programs including communications, education and financial rebates for rainwater tanks,
- water restriction enforcement,
- operation of groundwater systems,
- responding to an elevated number of water main breaks,
- purchasing water from Hunter Water,
- additional treatment costs due to Water Quality 2010 capital improvements, and
- additional treatment costs associated with fluoridating the water supply system.

Variables (whose certainty and potential impact is unclear and are therefore not included in operating expenditure forecasts) which may impact on Council's future water operating costs include:

- *Carbon pollution reduction scheme*
  The carbon pollution reduction scheme, proposed by the Federal Government, will potentially increase Council's fuel and electricity bills[6]. This scheme is discussed in Section 3.5.2.

- *Purchase of water from Hunter Water Corporation*
  The volume of water purchased from Hunter Water will depend upon weather and climate conditions over the next price period. Council understands that Hunter Water anticipates selling $500,000 of water per annum to the JWS. Council has accordingly included $250,000 in its operating budgets for the purchase of water from Hunter Water Corporation.

- *Energy requirements*
  The extent of the need to pump water and the costs of the required energy will depend upon the weather and climate conditions experienced during the price period. Council has included in its operating budgets a level of energy expenditure commensurate with the current operating scenario.

[6] Department of Environment and Climate Change 2008 *Carbon Pollution Reduction Scheme - Green Paper*

- *Central Coast Climate Change Fund*

  DECC has indicated that the Climate Change Fund (previously Water Savings Fund) will continue to 2011/12. As Council has not yet received an Order requesting payments into the fund, Council seeks for any contributions to be recovered from customers as a pass through when they are incurred. As such, the cost of contributions to the Climate Change Fund is not included in water operating budgets.

- *Implications of further critical drought*

  Whilst Council anticipates that the provision of water services will continue to be in a water constrained environment, it does not expect that the water supply situation will be as critical as has been experienced in the past few years. Should such events recur, Council would incur significant additional expenses in areas such as the usage of groundwater. These costs have not been included in the current water operating budgets.

3.3. Wastewater

Over the last four years considerable efforts have been focused on drought management initiatives. With the majority of drought planning and activities complete, Council is now able to return resources to managing, rehabilitating and replacing wastewater assets to ensure continued maintenance of required levels of service and regulatory compliance.

3.3.1 Capital expenditure

Council is proposing a significant wastewater capital investment program over the next price period. Major wastewater capital projects and their outcomes include:

- *Kincumber and Woy Woy STP upgrade*

  Major refurbishment of aging treatment facilities to maintain process efficiency, mitigate odours and ensure regulatory compliance particularly with regard to the PRP contained within Council's EPL.

- *Coastal Carrier System upgrade*

  Replacement/refurbishment of aging assets to prevent asset failure, accommodate increased flows and avoid sensitive lagoon crossings.

- *Wastewater enhancement program*

  This strategy has been developed to improve the performance of Council's wastewater system, particularly in regards to chokes, breaks and overflows to the environment (refer to Section 2.2.1). The program involves the purchase of two wastewater main jetters to facilitate an enhanced main cleaning program, modifications of Council's telemetry system to provide early warning of faults and also includes replacement and repair of wastewater mains and reticulation to reduce inflow/infiltration to Council's treatment system consequently improving treatment plant efficiency and reducing wet weather overflows.

- *Wastewater main renewal program*

  Replacement/refurbishment of aging assets to improve system reliability and prevent asset failure.

- *Priority Sewage Program (PSP) stage 2*

  This scheme will provide a wastewater scheme for areas identified under the PSP which include Little Wobby, Patonga Beach, Bar Point and areas in Bensville, Empire Bay and South Kincumber.

- *Minor and major SPS upgrades*

  Replacement/refurbishment of aging civil, electrical and mechanical asset components to prevent asset failure and reduce wastewater overflows.

- *Gosford CBD development servicing plan*

  This plan includes upgrades to replace aging wastewater assets and accommodate the expected increased populations associated with redevelopment of Gosford CBD in accordance with the Gosford City Centre Local Environment Plan (LEP).

Council's wastewater capital expenditure, net of grants over the next price period is presented in Table 6.

Table 6: Forecast wastewater capital expenditure ($million, real 2008/09)

	2009/10	2010/11	2011/12	2102/13	Total
Forecast capital expenditure	27.8	20.7	21.8	13.5	83.8

An analysis of the wastewater capital costs by driver of expenditure is presented in Figure 13.

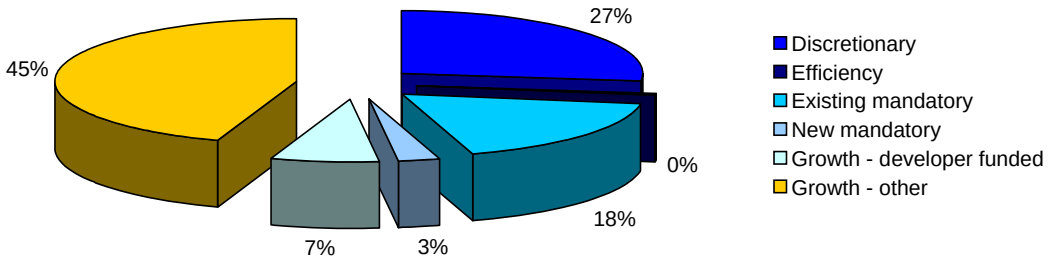

Figure 13: Forecast wastewater capital expenditure for the period 1 July 2009 to 30 June 2013 by driver

The wastewater capital expenditure program has been designed to meet customer, regulatory and environmental requirements and will maintain existing assets, replace aging assets, improve treatment system performance and reduce environmental risk. Levels of service have been developed with consideration to service outcomes and customer satisfaction presented in Section 2.2.1.

3.3.2 Operating expenditure

Council has critically reviewed its wastewater operating costs. As part of this review Council is proposing an efficiency saving of 0.5 percent in year one of the price period, a further 0.5 percent in year two and a further 0.25 percent in year three. During the current year Council will identify where such efficiencies can be achieved. Council's forecast wastewater operating expenditure over the next price period is presented in Table 7.

Table 7: Forecast wastewater operating expenditure ($million, real 2008/09)

	2009/10	2010/11	2011/12	2102/13	Total
Forecast operating expenditure	19.5	19.4	19.35	19.35	77.6
Efficiency savings	(0.1)	(0.2)	(0.25)	(0.25)	(0.8)
Net forecast operating costs	**19.4**	**19.2**	**19.1**	**19.1**	**76.8**

The main drivers behind elevated levels of wastewater operating expenditure are:

- operation of the additional wastewater scheme at Mooney Mooney Cheero Point,
- responding to an elevated number of wastewater main breaks and chokes,
- inflow and infiltration identification program,
- enhanced CCTV inspection program for sewer main condition assessment,

- backlog sludge management costs to reduce site holdings,
- continuation of the enhanced wastewater main cleaning program,
- increased wastewater treatment expenditure during the STP upgrade and bedding down periods, and
- extensive odour reduction investigations (both short and long term).

Variables (whose certainty and potential impact is unclear and are therefore not included in operating expenditure forecasts) which may impact on Council's future wastewater operating costs include:

- *Carbon pollution reduction scheme*
  The carbon pollution reduction scheme, proposed by the Federal Government, will potentially increase Council's fuel and electricity bills and may also require additional expenditure to 'offset' fugitive gas emissions from Council's wastewater treatment plants[7]. This scheme is discussed in Section 3.5.2.

Council requests that IPART recognise the higher and more variable operating costs of Council's secondary wastewater treatment plants relative to the preliminary and primary treatment provided by other water utilities.

3.4. Stormwater

3.4.1 Capital expenditure

Council has invested significantly more in stormwater assets than IPART allowed for in the last determination. Some of these investments have been made to take advantage of Government grants thereby minimising the financial impact on customers. In order to maintain and renew Council's stormwater system at its current condition and reduce the large capital works backlog, increased capital expenditure is required.

Council currently relies heavily on the Federal Government's Natural Disaster Mitigation Program (NDMP) and the State Government to fund stormwater capital works projects. The NDMP finishes in June 2009 and consequently Council's source of future funding is highly uncertain. The capital works program over the next price period is presented in Table 8 and reflects the increased capital expenditure Council will be required to fund due to the likely reduction of external funding.

[7] Department of Environment and Climate Change 2008 *Carbon Pollution Reduction Scheme - Green Paper*

Table 8: Forecast stormwater capital expenditure ($million, real 2008/09)

	2009/10	2010/11	2011/12	2102/13	Total
Forecast capital expenditure	6.3	6.1	5.7	6.0	24.1

An analysis of the stormwater capital costs by driver of expenditure is presented in Figure 14.

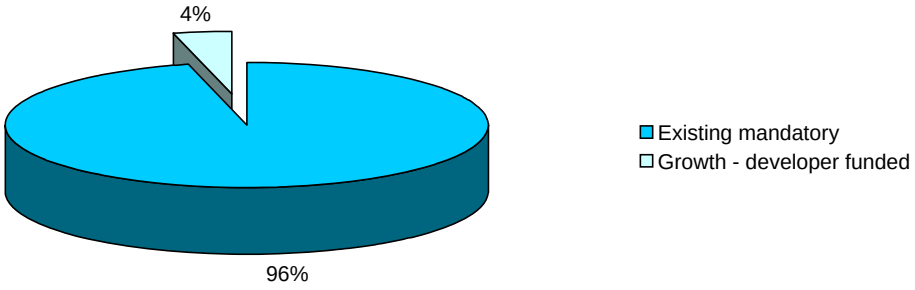

Figure 14: Forecast stormwater capital expenditure for the period 1 July 2009 to 30 June 2013 by driver

3.4.2 Operating expenditure

As highlighted in Section 2.3.3, Council has incurred operating costs for its stormwater services at a much higher level than was accepted by IPART in its 2006 price determination. The elevated level of operating expenditure in the current price period is required in the future to appropriately manage stormwater assets so as to mitigate the impacts of flooding events on the community, public assets and the environment.

As with its other operating costs, Council has critically reviewed its operating expenditure and within this framework proposes the stormwater operating expenditure over the next price period presented in Table 9.

Table 9: Forecast stormwater operating expenditure ($million, real 2008/09)

	2009/10	2010/11	2011/12	2102/13	Total
Forecast operating expenditure	4.7	4.7	4.5	4.5	**18.4**

The stormwater expenditure program has been designed to meet customer, regulatory and environmental requirements and will maintain existing assets, reduce flooding risk and enable increased use of water sensitive urban design. Levels of service have been developed with consideration to service outcomes and customer satisfaction presented in Section 2.3.1.

3.5. Emerging issues

3.5.1 Central Coast Water Corporation

The Central Coast Water Corporation Act 2006 was passed by the NSW Government in November 2006. The Act provides for the establishment of the Central Coast Water Corporation (CCWC) as a water supply authority under the Water Management Act 2000 for the purposes of providing water, wastewater and stormwater services.

The establishment of the CCWC requires the merging of Gosford and Wyong Councils' water businesses into a single corporate entity with the Councils as the shareholders. It is proposed that the CCWC will be governed by a Board of Directors. Its responsibilities and obligations to its shareholders will be established on an annual basis through a Statement of Corporate Intent. Once the CCWC is established, the Councils will no longer be water supply authorities under the Water Management Act 2000.

Council has resolved to support the establishment of the CCWC. In doing so, Council recognises the potential benefits of the CCWC including economies of scale and scope in the provision of water related services to residents on the Central Coast. The establishment of the CCWC requires two principle processes, namely the creation of a commercial framework and the merging of two existing businesses and cultures. Both processes require extensive investigation and negotiations with internal and external stakeholders.

In February 2008, Council resolved to establish a Steering Committee with Wyong Council for the purpose of progressing the establishment of the CCWC. A Steering Committee has been established comprising the Mayors, Deputy Mayors and Water and Sewerage Directors of both Councils. Also on the Steering Committee are representatives from the United Services Union (USU) and the Association of Professional Engineers, Scientists & Managers, Australia (APESMA).

To progress the establishment of the Corporation, the Steering Committee has recommended the engagement of an advisor to provide strategic assistance to the Councils. The advisor, with input from expert external consultants, will assist the Councils investigate the risks and develop strategies associated with each stage of the corporatisation and business merger process. Subsequently, the advisor will assist in developing a project plan and implementation framework to establish the Corporation.

It has also been agreed that working parties be established to investigate specific issues such as industrial relation matters.

The cost of CCWC investigation and planning activities is expected to be in the order of $1 million over the next 12 to 24 months. As the exact value of these costs is not known Council has not included these in its operating budgets, however, Council seeks to recover these costs from the Central Coast community as a pass-through within the next price period.

3.5.2 Climate change

Climate change presents significant challenges for Council's water business. It is expected that that climate change will result in reduced streamflows on the Central Coast whilst customer demands may increase in warmer/drier conditions. The Councils recognise the significant impacts that climate change is likely to have upon water supplies on the Central Coast. As such, strategic water supply plans, including WaterPlan 2050, incorporate the potential impacts of climate change.

A rainfall-runoff model has been used to estimate the month-by-month percentage changes in runoff and streamflows due to climate change induced rainfall reductions and increased evaporation. The estimated percentage streamflow changes have been incorporated into the water supply system model. The system model also calculates variations in monthly demands based on rainfall and evaporation. System modelling and analysis has been based on a temperature rise of 0.3˚ C per decade over the period 2006 to 2050. This is double the historical increase of about 0.15˚ C per decade.

However, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) projections indicate that without greenhouse gas reduction strategies, temperatures could increase by up to 0.6˚ C per decade. A sensitivity analysis has been undertaken to model the impact of these temperature changes. This analysis indicates that temperature increases of 0.6˚ C per decade would bring forward the need to augment the water supply scheme from the year 2050 to approximately 2035. The adaptive management approach adopted within WaterPlan 2050 will assist the Councils to best manage the uncertainties and risks related to climate change.

In addition to the impacts climate change may have upon the yield of Central Coast water sources, climate change is expected to influence the way the Councils manage their water businesses and increase operating expenditure. In July 2008, the Federal Government released its proposal to introduce a carbon pollution reduction scheme.

The proposed scheme enables trading of carbon emission permits, places a cap on carbon pollution and aims to reduce the total amount of carbon entering the atmosphere[6]. Although the precise costs of this scheme are not currently known it is expected that pricing carbon emissions may increase Council's water business operating expenditure by approximately $300,000 per annum (based on Council's current estimated wastewater fugitive gas emissions and a carbon price of $20 per tonne). The scheme is also likely to increase the cost of Council's fuel and electricity purchases. Assuming the full cost of carbon is passed on to electricity and fuel customers, Council's water business costs are estimated to increase by a further $600,000. Given the current uncertainty surrounding the timing, scope and details of the Federal pollution reduction scheme and the future price of carbon, the impact of these initiatives has not been included in the operating costs estimates. Council seeks to pass any additional costs through to customers when they are incurred by Council.

Climate change will also impact upon the management of Council's stormwater system. Projected sea level rise will significantly affect low lying coastal and estuarine areas, such as parts of Woy Woy, Davistown and Empire Bay. Council has produced sea level rise impact mapping for each of these areas. Stormwater management will become increasingly challenging as large areas previously above the high water mark become inundated by the tide each day.

3.5.3 Developer charges

In November 2007 IPART commenced a review of developer charges for metropolitan water agencies. A draft Report and Determination have now been released. Council has provided submissions to IPART regarding the review and draft determination. The following constitutes a summary of Council's comments provided to IPART and a discussion of the impact that the new determination may have on expected revenue.

In comparison to other metropolitan water agencies, the relatively low level and type of development in the Gosford LGA (revenue from developer charges comprises less than four percent of total income) limits the likely revenue impacts from changes to the determination.

Draft decision 1 ("Assets that will be more than 30 years old at the date of review of a Development Servicing Plan (DSP) or the introduction of a new DSP must be excluded from the capital charge." [8]) will potentially decrease the value of developer contributions

[8] Independent Pricing and Regulatory Tribunal 2008 *Review of developer charges for metropolitan water agencies - Draft Determination and Draft Report*

received. Head and tail works infrastructure, such as dams and treatment facilities, are often constructed with capacity designed to meet future demand. The rate of development, and thus demand, is outside of the control of the water agencies. Under the draft Determination, the water agency could be penalised if demand does not materialise at the intended rate and the capacity to recover costs is lost as the asset falls outside of the 30 years timeframe.

A final determination has not yet been made and Council requests that IPART bring this issue into consideration when determining Council's future revenue requirements.

3.5.4 Tillegra Dam

Hunter Water Corporation and the Councils currently have an agreement for the sale of water between the Hunter and the Central Coast. This agreement was established in March 2006 and formed the basis for the development of the existing Hunter-Central Coast water supply link. The agreement sets out financial arrangements for capital contributions towards the associated infrastructure and details the price for water transfers. It also details the arrangements for managing the timing, volume and direction of transfers. The agreement is for a period of 20 years expiring in 2026.

Subsequent to the agreement and development of the Hunter-Central Coast water supply link, the State Government announced its intention to construct Tillegra Dam.

Hunter Water Corporation and the Councils are currently considering potential cost sharing arrangements for Tillegra Dam and the supply of water. Negotiations are continuing with particular focus on:

- the methodology for timing and quantum of water transfers,
- mechanisms which equitably account for the net benefits derived by optimal transfers between the systems,
- capital contributions towards the Tillegra Dam, and
- the purchase price of water transferred.

No costs related to Tillegra Dam have been included in Council’s operating or capital expenditure forecasts.

3.5.5 Other regulatory changes

DECC has indicated that a review of the Protection of the Environment Operating (POEO) Regulation 1998, including the load based licensing calculation protocol, will be undertaken during the next price period. This review may increase the requirement for Council to prevent/mitigate environmental harm, particularly with regard to Council's wastewater system. Enhanced capital works and operating strategies to minimise environmental risk and comply with additional requirements resulting from the review are likely to increase Council's operating and capital expenditure.

The Councils are currently in negotiation with DWE regarding Water Sharing Plans for water supply source streams on the Central Coast. Though the draft Water Sharing Plan has not been released at this stage, significant discussions have been held between Council and DWE. The particulars of the Water Sharing Plans will influence the way Council operates its system and may require additional capital expenditure to reduce the impacts of water extraction infrastructure on stream ecology.

3.6. Metered water sales and customer numbers

Metered water sales over the price path have been developed using the GWCWA's stochastic model to predict water use as the Central Coast moves out of severe drought. The methodology and assumptions used to forecast metered water sales are presented in Appendix C. Forecast metered water sales over the price period are presented in Table 10.

Table 10: Forecast metered water sales (ML/y)

	2009/10	2010/11	2011/12	2012/13
Residential	10,218	11,129	12,053	13,122
Non residential	2,093	2,280	2,469	2,688
Total	**12,311**	**13,409**	**14,522**	**15,810**

The forecast number of connected properties over the price period is presented in Table 11. The forecasts have been developed using best available planning information and are in line with NSW Government population forecasts.

Table 11: Forecast number of connected properties

	2009/10	2010/11	2011/12	2012/13
Water				
Residential	64,706	65,094	65,484	65,877
Non residential	3,084	3,102	3,121	3,140
Total water	67,790	68,196	68,605	69,017
Wastewater				
Residential	62,590	62,966	63,344	63,724
Non residential	2,984	3,002	3,020	3,039
Total wastewater	65,574	65,968	66,364	66,763
Stormwater				
Residential	67,304	67,708	68,115	68,523
Non residential	3,368	3,388	3,409	3,429
Total stormwater	70,672	71,096	71,524	71,952

In its 2005 determination for Sydney Water, Hunter Water and Sydney Catchment Authority, IPART adopted a mechanism to address the risk due to variation between forecast and actual water consumption. The mechanism provided that, where consumption varied more than ten percent above/below forecast water sales, IPART may consider adjusting the revenue requirement for the subsequent determination to account for the effect of the difference. Council requests that a similar consumption adjustment mechanism be incorporated into Council's determination.

4.0 REVENUE REQUIREMENTS

4.1. Overview

Council has used the building block approach in assessing the revenue requirements for each of its regulated services. In assessing revenue needs, Council has critically reviewed its budgets to establish baseline operating and capital costs. Council has considered the building block components (operating costs, return of assets (depreciation) and return on assets) in the assessment of the revenue needs for each of water, wastewater and stormwater.

4.1.1 Depreciation

One component of the building block approach is depreciation (or return) of the regulatory asset base (RAB). IPART currently depreciates Council's RAB as follows:

- for new assets a life of 100 years is adopted, and
- for the opening regulatory asset base the remaining average life, based upon the new asset life for new assets, is adopted.

Council has considered whether these lives appropriately reflect the economic life of its asset base. In general terms, Council's capital program renews assets with an economic life significantly shorter than 100 years e.g. mechanical and electrical components. However for this determination Council is not proposing alternative asset lives. This is for the following reasons:

- it is anticipated that a corporatised entity responsible for delivery of water, wastewater and stormwater services to all communities on the Central Coast will be established within the next price period. Council considers that it is more appropriate that the economic lives of assets be considered, and if appropriate, adjusted by this new entity rather than potentially having two changes to asset lives, and
- a significant component of Council's capital program in this submission relates to long-lived assets.

Therefore, it is anticipated that the relevant water authority will consider the appropriate economic lives for assets in the subsequent determination.

4.1.2 Regulated asset base (RAB)

Council has calculated the RAB as at 1 July 2009 for the water, wastewater and stormwater services using IPART's methodology as follows:

+ IPART's determined RAB as at 1 July 2006
- capital expenditure incurred/budgeted to 30 June 2009
- disposal of assets to 30 June 2009
- depreciation of the asset base
+ inflation adjustment
= RAB as at 30 June 2009

4.1.3 Rate of return (RoR)

Council has reviewed the parameters adopted by IPART to calculate the weighted average cost of capital (WACC) in its June 2008 final determination for Sydney Water. These parameters are presented in Table 12.

Table 12: Parameters used to calculate the WACC

Parameter	Sydney Water Determination
Nominal risk free rate	6.1%
Inflation	3.6%
Real risk free rate	2.4%
Market risk premium	5.5% - 6.5%
Debt margin	3.1% - 3.7%
Debt to total assets	60%
Dividend imputation	0.5-0.3
Gamma	30%
Equity Beta	0.8 - 1.0
Cost of equity	10.6% - 12.6%
Cost of debt	9.3% - 9.8%
WACC (real pre-tax)	6.8% - 8.4%
Mid point WACC (real pre-tax)	**7.5%**

Council anticipates that the market-based parameters will be adjusted to prevailing market conditions at the time of the final determination. On this assumption Council considers that the above parameters are appropriate for its price determination. For the purposes of this submission the revenue requirements have been calculated adopting a real pre-tax WACC of 7.5%.

4.1.4 Corporate service costs

In the previous price determination IPART specifically considered the costs incurred by Council in providing corporate services to the water, wastewater and stormwater businesses. This submission includes the costs of corporate services within the operating budget of each regulated service.

The provision of Council's water, wastewater and stormwater services is predominantly resourced from Council's water business. Council's other Directorates support the regulated business by providing corporate services particularly in the areas of:

- corporate governance,
- strategic planning,
- human resource, treasury, legal, accounting and financial reporting services,
- office accommodation and associated support,
- information and communications technology software and support, and
- records, stores and fleet management.

The costs of corporate services are recorded against the Council Directorate responsible for providing the service, however, it is critical that in assessing the costs of providing water, wastewater and stormwater services, that the costs of the corporate services are included.

Council has undertaken an analysis of the costs of corporate services and identified an activity-based framework which enables appropriate allocation of these costs as shown in Figure 15.

Drivers that have been adopted in the allocation of corporate costs include:

- office space used,
- number of computers,
- number of staff, and
- number of transactions.

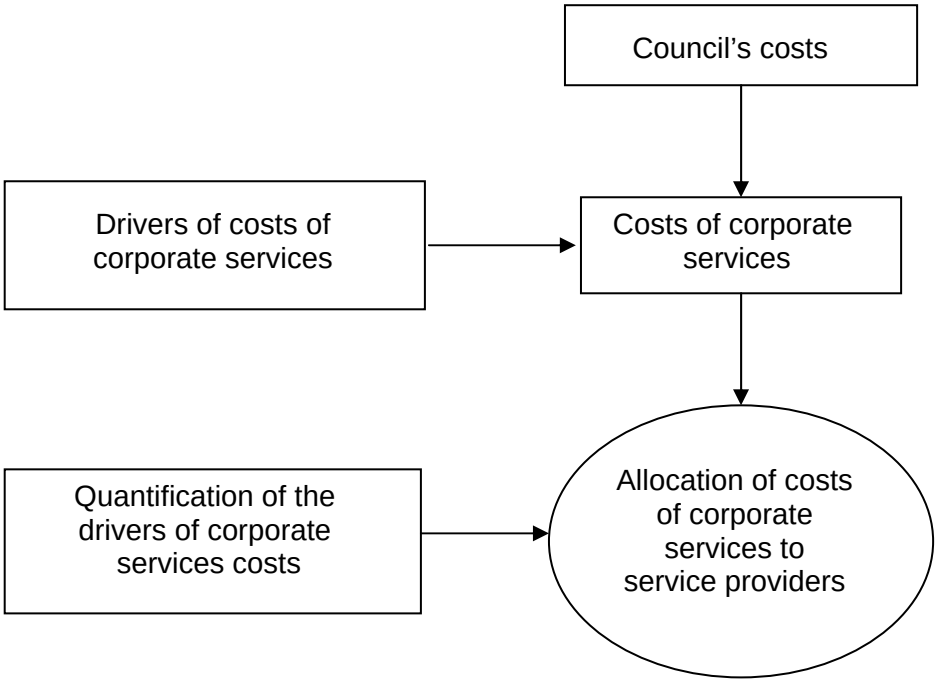

Figure 15: Corporate cost allocation

Table 13 presents the cost allocation of corporate services to water, wastewater and stormwater.

Table 13: Allocation of corporate services ($million, real 2008/09)

	2009/10	2010/11	2011/12	2012/13
Water	4.0	4.1	4.1	4.1
Wastewater	3.3	3.3	3.3	3.3
Stormwater	1.7	1.7	1.7	1.7

[1]The relevant section of Council has not prepared budgets for 2012/13. It is therefore assumed that the level of costs for 2012/13 will be the same as for 2011/12.

4.2. Water

Adopting the building block approach, the revenue requirements for Council's water service over the next price period are presented in Table 14.

Table 14: Water revenue requirements ($million, real 2008/09)

	2009/10	20010/11	20011/12	2012/13
Operating expenditure	19.6	20.1	19.7	17.8
Return of regulatory asset base	3.2	3.3	3.4	3.4
Return on regulatory asset base	18.7	19.9	19.9	20.4
Return on working capital	0.1	0.2	0.2	0.2
Notional revenue requirement	**41.6**	**43.5**	**43.2**	**41.8**

4.3. Wastewater

Adopting the building block approach, the revenue requirements for Council's wastewater service over the next price period are presented in Table 15.

Table 15: Wastewater revenue requirements ($million, real 2008/09)

	2009/10	20010/11	20011/12	2012/13
Operating expenditure	18.9	18.8	18.7	19.6
Return of regulatory asset base	3.1	3.3	3.5	3.7
Return on regulatory asset base	16.5	18.0	19.3	20.3
Return on working capital	0.1	0.2	0.2	0.2
Notional revenue requirement	**38.6**	**40.3**	**41.7**	**43.8**

4.4. Stormwater

Adopting the building block approach, the revenue requirements for Council's stormwater service over the next price period are presented in Table 16.

Table 16: Stormwater revenue requirements ($million, real 2008/09)

	2009/10	20010/11	20011/12	2012/13
Operating expenditure	4.7	4.7	4.5	4.5
Return of regulatory asset base	0.2	0.2	0.3	0.3
Return on regulatory asset base	1.1	1.6	2.0	2.4
Return on working capital	<0.1	<0.1	<0.1	<0.1
Notional revenue requirement	**6.0**	**6.5**	**6.8**	**7.2**

4.5. Total notional revenue requirement

Council's total notional revenue requirement is presented in Table 17.

Table 17: Total revenue requirements ($million, real 2008/09)

	2009/10	20010/11	20011/12	2012/13
Water	41.6	43.5	43.2	41.8
Wastewater	38.6	40.3	41.7	43.8
Stormwater	6.0	6.5	6.8	7.2
Total notional revenue requirement	**86.2**	**90.3**	**91.7**	**92.8**

5.0 PROPOSED PRICING

5.1. Pricing overview

Council is proposing a pricing structure commensurate with the Intergovernmental Agreement on a National Water Initiative of June 2004, namely:

- continued movement towards upper bound pricing by 2008,
- development of pricing policies for recycled water and stormwater that are congruent with pricing policies for potable water, and stimulate efficient water use no matter what the source, by 2006,
- review and development of pricing policies for trade wastes that encourage the most cost effective methods of treating industrial wastes, whether at the source or at downstream plants, by 2006, and
- development of national guidelines for customers' water accounts that provide information on their water use relative to equivalent households in the community by 2006.

Council proposes no major changes to its current pricing structure. Specifically, Council seeks to retain the key features of the existing pricing structure listed below:

- uniform or 'postage stamp' pricing for water, wastewater and stormwater services across Council's area of operations,
- recovery of the cost associated with wastewater and stormwater services through a fixed charge,
- water usage charges designed to encourage water efficient consumption,
- calculation of fixed charges for water services as the residual of the revenue requirement not recovered through usage charges or developer charges, and
- the price of water services comprises of a fixed and a single tier usage component (two-part tariff). Council does not support the introduction of an inclining block tariff as this would introduce unintended equity issues and increase Council's revenue uncertainty.

Council proposes prices increases to:

- recover revenue requirements,
- support the commitment to securing water supplies on the Central Coast,

- maintain existing assets to meet operating licence requirements and customer service standards,
- improve its overall financial position, and
- support appropriate protection of the environment.

If the implications of the drought had been fully understood at the time of the 2006 price determination the above information would have resulted in Council's current prices for water, wastewater and stormwater services being significantly higher. Had the drought associated costs been included in the prices set in 2006, the potential price shock, which is now necessary to recover the current revenue needs, would be reduced.

Council recognises that the price increases required to fully recover the revenue needs of its services within the price period would apply significant additional pressure to household budgets.

Therefore, Council has given particular consideration to the social impacts of price increases on the residents and commercial businesses of the Central Coast at a time when Australian and global economic pressures are severely impacting the community.

At the same time Council is committed to:

- complying with the Intergovernmental Agreement to fully recover the costs of supplying water services including operating costs, depreciation and an appropriate return on investment, and
- send appropriate price signals to water users.

It is against this framework that Council proposes the following approach to adjust the required revenue and consequently set prices which will have a lower impact on the community:

- *Period to achieve the recovery of revenue needs*
  Historically, the revenue needs of regulated business have been recovered over the period of a single price determination, four years in this case. Council proposes that for this price determination the revenue needs be recovered over an eight year period (on a net present value basis). In making its proposal Council has assessed its operating and capital expenditure needs for the second four year period and the proposed prices will recover the net present value of the total revenue needs over the eight year period.

- *Rate of return to the equity owner*

  Council, representing the community and acting as equity owner of the water business, is expected to earn a rate of return on its investment at the rate commensurate with the industry norm. As noted above Council is concerned about the social and economic impacts that price increases will have on its customers. Therefore, for this pricing submission, Council is proposing to mitigate the impact through a reduction in the rate of return that it earns on the community's investment in the water businesses.

  Council accepts that an appropriate rate of return for the water business is 7.5% real pre-tax (subject to prevailing market conditions). Within this, the implied rate of return to the equity holder is approximately 10.9% as presented in Table 12. Council proposes to reduce its equity rate of return for this price period to 9.0% nominal. This reduction in the equity rate reduces the rate of return from 7.5% to 6.3% real pre-tax.

Council requests IPART to accept these proposals and formally acknowledge that, in the pricing period anticipated to commence on 1 July 2013, the revenue requirements will include the component of revenue needs resulting from this proposal.

5.2. Adjusted revenue requirements

The revised revenue needs using the eight year revenue recovery period and a rate of return of 6.3% real pre-tax results in the revenue needs presented in Table 18.

Table 18: Adjusted total revenue requirements ($million, real 2008/09)

Service	2009/10	2010/11	2011/12	2101/13
Water	37.9	39.5	39.2	38.0
Wastewater	35.3	36.6	37.8	39.6
Stormwater	5.8	6.2	6.4	6.8

A detailed breakdown of the adjusted revenue requirements for water, wastewater and stormwater is presented in Appendix D.

The smoothed revenue needs upon which pricing are based is presented in Table 19.

Table 19: Smoothed revenue requirements ($million, real 2008/09)

Service	2009/10	2010/11	2011/12	2012/13
Water	39.0	39.0	39.0	39.0
Wastewater	38.4	38.4	38.4	38.4
Stormwater	7.0	7.0	7.0	7.0

Council proposes a constant price increase over the period, i.e. no P-nought adjustment. Council wishes to minimise any price 'shocks' that will place further pressure on household budgets.

5.3. Water

Proposed water usage and service charges are presented in Table 20.

Table 20: Proposed water prices

Charge	2009/10	2010/11	2011/12	2012/13
Water usage charge ($/kL)	1.77	1.82	1.89	1.95
Water service charge[1] ($/y)				
20mm	95.82	103.78	112.39	121.72
25mm	149.72	162.15	175.61	190.19
32mm	245.31	265.67	287.72	311.60
40mm	383.32	415.13	449.59	486.90
50mm	598.93	648.64	702.48	760.79
65mm	1,012.18	1,096.19	1,187.18	1,285.71
80mm	1,533.26	1,660.52	1,798.34	1,947.60
100mm	2,395.70	2,594.55	2,809.90	3,043.12
150mm	5,390.34	5,837.74	6,322.27	6,847.02

[1]Exclusive of any contribution to the NSW Climate Change Fund.

5.4. Wastewater

Proposed wastewater usage and service charges are presented in Table 21.

Table 21: Proposed wastewater prices

Charge	2009/10	2010/11	2011/12	2012/13
Wastewater usage charge[1] ($/kL)[2]	0.88	0.94	1.00	1.07
Wastewater service charge ($/y)				
20mm	425.56	453.43	483.13	514.78
25mm	497.12	529.68	564.38	601.34
32mm	814.47	867.82	924.66	985.22
40mm	1,272.62	1,355.98	1,444.79	1,539.43
50mm	1,988.47	2,118.72	2,257.49	2,405.36
65mm	3,360.51	3,580.63	3,815.16	4,065.05
80mm	5,090.48	5,423.90	5,779.17	6,157.70
100mm	7,953.87	8,474.85	9,029.95	9,621.41
150mm	17,896.21	19,068.41	20,317.40	21,648.18

[1]Applicable to non residential customers only.
[2] Per kL of water used multiplied by the discharge factor.

5.5. Stormwater

Proposed stormwater service charges are presented in Table 22.

Table 22: Proposed stormwater prices

Charge	2009/10	2010/11	2011/12	2012/13
Stormwater service charge ($/y)	65.80	72.34	79.43	87.21

5.6. Miscellaneous and ancillary

Council proposes to increase its miscellaneous and ancillary fees and charges with the Consumer Price Index (CPI) over the next price period. Additionally, Council proposes a number of minor changes to the miscellaneous and ancillary charges as described below.

Charge 19: Major and minor works inspections fee

Council seeks to amend the wording of this charge to more accurately reflect the service that Council provides and enable Council to recover costs for assessing works less than 25m and/or 2m deep. Council proposes that the existing fee explanation be amended to "This fee is for the inspection, for the purpose of approval of water and wastewater mains constructed by others" and request the removal of "that are longer than 25metres and/or greater than 2 metres in depth". Additionally, Council requests the inclusion of "a minimum charge of $100 will apply".

Charge 34: Water service connection fee

The current determination enables Council to charge $300 for the installation of a 20 or 25mm water connection and recover the actual cost for larger connections using a quote. Due to an administrative oversight the charges for 20 and 25mm connections were inadvertently combined during the 2003 price review. Council seeks to have the 20 and 25mm connection charges separated again as they were in 1998. Council proposes that the current charge applicable for a 20mm connection remain (indexed annually with CPI) and that the installation of 25mm connections be charged at the actual cost as quoted by Council.

Council incurs greater costs for 25mm connections (in comparison to 20mm) due to the increased meter cost, larger pipes and the requirement for piping from the main to the meter (20mm connections usually only involve the meter). The current combined charge for 20 and 25mm connections results in a cross subsidy which Council seeks to remove.

A proposed change to miscellaneous and ancillary charge 31 'Trade Waste Approvals' is presented in Section 5.7.

5.7. Trade waste

In order to recover the costs of administration and inspection of Council's liquid trade waste customers, an increase to the current trade waste charges is proposed. The proposed trade waste charges are presented in Table 23. The prices have been developed by apportioning the trade waste administration and inspection costs across the trade waste categories. Costs have been apportioned based on the inspection requirements for each category as prescribed by Council's trade waste policy and DWE guidelines[9]. Specifically, Category 1 dischargers require an annual inspection, Category 2 dischargers require quarterly inspections and Category 3 dischargers require monthly inspections. The proposed pricing reflects the costs attributable to dischargers in each category.

[9] Department of Energy, Utilities and Sustainability 2005 *Liquid Trade Waste Management Guidelines*

Table 23: Proposed trade waste prices

Charge	2008/09	2009/10	20010/11	20011/12	2012/13
Approval ($/5y)[1]	233.86	329.00	329.00	329.00	329.00
Trade waste agreement fee Category 1 ($/y)	72.60	165.00	165.00	165.00	165.00
Trade waste agreement fee Category 2 ($/y)	72.60	310.00	310.00	310.00	310.00
Trade waste agreement fee Category 3 ($/y)	72.60	400.00	400.00	400.00	400.00
Liquid trade waste reinspection fee ($)	123.57	123.57	123.57	123.57	123.57
Trade Waste Usage Charge ($/kL)	1.41	1.41	1.41	1.41	1.41

[1]Miscellaneous and ancillary service charge 31

Charging of the fees presented in Table 23 will enable full cost recovery of trade waste inspection and administration costs from trade waste customers and reduce cross subsidisation from the wider wastewater customer base and between trade waste customer categories.

Council proposes to increase all other trade waste charges with the Consumer Price Index (CPI) over the next price period.

6.0 IMPACTS AND EXPECTED OUTCOMES

6.1. Implications for customers' bills

Although Council's proposed prices have been developed with particular consideration given to the social impacts on the community, it will result in increases to bills for water, wastewater and stormwater customers. Table 24 presents an average water, wastewater and stormwater bill for a residential property.

Table 24: Average residential property bill

	2008/09	2009/10	2010/11	2011/12	2012/13	Increase over the period
Based on average residential consumption (kL/property)	157	157	170	184	199	
Water usage	$263.69	$279.51	$311.69	$347.30	$389.01	48%
Water fixed	$91.40	$98.99	$107.20	$116.10	$125.74	38%
Wastewater	$408.09	$434.82	$463.30	$493.65	$525.98	29%
Stormwater	$60.82	$65.80	$72.34	$79.43	$87.21	43%
Total water and wastewater	$763.18	$813.32	$882.19	$957.05	$1,040.73	36%
Total water, wastewater and stormwater	**$824.00**	**$879.12**	**$954.53**	**$1,036.48**	**$1,127.94**	**37%**

During the recent period of water restrictions, the Central Coast community has demonstrated its ability to reduce water usage and consequently their water bills. Whilst water usage per household is expected to increase as mandatory water restrictions are eased, many households have the continued ability to conserve water and thus moderate the impact of water usage price increases on their bill. Council's demand management initiatives (such as rebates for efficient washing machines and rainwater tanks and refit kits) provide additional mechanisms to assist customers reduce their water usage.

6.2. Mitigating impacts on customers

IPART is currently undertaking a survey of Central Coast households to obtain information relevant to water, gas and electricity usage as well as household economic and demographic characteristics. The findings of the survey are not expected to be published by IPART until October 2008. The results of IPART's demographic survey are likely to influence the most appropriate types of assistance measures Council may implement. Council recognises the need for, and is committed to, the expansion of

financial assistance measures to mitigate price impacts upon low income customers. For these measures to provide most benefit to customers in need of assistance, Council proposes to develop assistance measures with regard to the insight provided by IPART's survey.

Recently, media attention has been given to the difference between pensioner rebates between metropolitan areas and local government areas. Council recognises that this difference raises issues of potential inequity. The Local Government Act prescribes the value of pensioner rebate that Council is able to provide. As such, any changes to the value of pensioner rebates provided by Council would require modification of the Local Government Act.

6.3. Financial sustainability

Maintaining the financial sustainability of Council’s water business is in the interests of all stakeholders. It is anticipated that the Central Coast Water Corporation will become a reality within the foreseeable future and Council is committed to transferring a financially robust and sustainable water business into the new Corporation thus ensuring it can fully develop the commercial, economic and environmental opportunities on the Central Coast.

The proposed price changes will ensure that Council's water business will remain financially sustainable into the future.

GLOSSARY

Annual Revenue Requirement	The revenue required to recover the efficient costs of providing regulated services.
APESMA	Association of Professional Engineers, Scientists & Managers, Australia
BASIX	Building Sustainability Index
Catchment	The area drained by a stream, lake or other body of water, areas that feed into dams. May also refer to areas served by a wastewater or stormwater system.
CBD	Central Business District
CCS	Coastal Carrier System
CCWC	Central Coast Water Corporation
Central Coast	Gosford and Wyong Shire Local Government Areas
Climate Change Fund	Established under the *Energy and Utilities Administration Act 1987*, incorporates the Water and Energy Funds, the Climate Action Grants Program and funding from the Environmental Trust. Provides rebates for rainwater tanks in homes and schools.
CCTV	Closed Circuit Television
Council	Gosford City Council
CPI	Consumer Price Index
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CWG	Community Water Grants
d	day
DADHC	Department of Aging Disability and Home Care
DECC	Department of Environment and Climate Change
Demand Management	Strategies to reduce water consumption by residential, commercial and industrial sectors.
Desalination	The process that removes salt from saline water to produce freshwater.
DoH	Department of Health
DSP	Development Servicing Plan
DWE	Department of Water and Energy
EPL	Environment Protection Licence, as issued by DECC
GIS	Geographic Information System
IPART	Independent Pricing and Regulatory Tribunal, the independent body that oversees regulation in the water, gas, electricity and public transport industries in NSW.
IWCM	Integrated Water Cycle Management

JWS	Joint Water Supply
kL	Kilolitre, measurement of volume equal to one thousand litres.
km	Kilometre
LEP	Local Environment Plan
LGA	Local Government Area
Litre	Litre, a measurement of liquid volume.
ML	Megalitre, measurement of volume equal to one million litres.
NDMP	National Disaster Management Plan
NSW	New South Wales
POEO	Protection of the Environment Operations
Potable	Fit or suitable for drinking
PRP	Pollution Reduction Program
PSP	Priority Sewerage Program
RAB	The Regulatory Asset Base used to provide regulated services, determined by IPART and used in estimating the Annual Revenue Requirement.
Rainwater Tank	On-site water storage to collect rainwater for beneficial use.
Recycled Water	Highly treated wastewater that can be used in industrial processes, to irrigate agriculture, urban parks and landscapes, an in the home for flushing toilets, car washing and watering gardens. It is not for drinking or personal use.
SPS	Sewage Pump Station
Stormwater	Rainwater that runs off the land, frequently carrying various forms of pollution, such as litter and detritus, animal droppings and dissolved chemicals. This untreated water is carried in stormwater channels and discharged directly into creeks, rivers, the harbour and the ocean.
STP	Sewage Treatment Plant, which improves sewage quality before discharge to receiving waters.
Trade Waste	Industrial or commercial wastewater that contains significant quantities of potential contaminants, commonly controlled by trade waste agreements limiting trade waste inputs to the sewerage system at the source.
The Councils	Gosford City Council and Wyong Shire Council
USU	United Services Union
WACC	Weighted Average Cost of Capital
Wastewater	The dirty water or wastewater that goes down the drains of homes, offices, shops, factories and other premises and is discharged into the wastewater system. Also known as sewage.
Wastewater System	The system of pipes and pump station for collecting and transporting wastewater from each property to the treatment plant.

Water Efficiency	Preventing and reducing wasteful, uneconomical, impractical or unreasonable use of water resources.
Water Demand	Total water use requirements for drinking, agriculture, industry, recreation and gardening, seasonal and highly influenced by the weather.
Water Savings Fund	Part of the *Metropolitan Water Plan* that provides $135 million over four years for water saving and recycling projects within Gosford City Council's area of operation. Now part of the Climate Change Fund.
WELS	Water Efficiency Labelling Standards
WMPs	Water Management Plans
WSAA	Water Services Association Australia

Appendix A
Demand management measures and alternate water source options

DWE's Best-Practice Management of Water Supply and Sewerage Guidelines August 2007 require the preparation of a number of strategic documents including a:

- demand management plan,
- drought management plan,
- IWCM strategy.

These plans identify Council's demand management initiatives and alternate water source options. Council's demand management plan involves a combination of different demand reduction measures involving the community, business and Council. Table 1 details the status of Council's demand management measures and alternate water source options at 31 July 2008.

Table 1: Summary of demand management measures and alternate water source options

Program	Estimated Water Savings (ML/a)	Description
Reticulation system leakage detection program	570	This program commenced in January 2004 and is designed to identify and reduce the level of leakage in the water supply system. The active leakage component of this program has been temporarily suspended due to Water Quality 2010 commitments. The program is due to recommence in late 2008. All accessible trunk mains have also been inspected for leakage in September 2006. In addition to active leakage control, a bulk flow water metering program has commenced. This will assist in monitoring system demand and help guide future leakage programs. The contract for supply of the meters was recently awarded to a private sector partner with installation commencing mid September 2008. Data obtained from the program will assist future leakage studies by identifying 'hot spots'.
Water management plans and water usage audits	540	This program was introduced during Level 2b restrictions for water users consuming greater than 6ML per year and subsequently expanded with level 3 water restrictions for businesses using greater than 3.5ML per year requiring the implementation of water usage reduction programs.
Internal effluent reuse at Woy Woy &	364	Implemented in January 2006 this project reduced the amount of potable water used for wastewater treatment

Program	Estimated Water Savings (ML/a)	Description
Kincumber treatment plants		plant maintenance.
Rainwater tank rebates	184	This program commenced on 1 January 2003 providing financial rebates for the installation of rainwater tanks, on existing residential properties, for non-drinking purposes. Over 5000 rainwater tank rebates have been issued to Council residents. Estimated savings have been based on a 5,000L tank.
System pressure management program	150	This program provides for the reduction of leakage from the reticulation network and end usage by managing pressures where practical. Pressure Reduction Valve installations at St Hubert's Island and Patonga are due for completion before the end of 2008.
Alternative water supply for Council sports facilities and amenities	120	The program provides for alternative water supplies to service Council fields and amenities, including Central Coast Stadium. 19 playing fields have been retrofitted with rainwater tanks for irrigation/hand watering purposes. Rainwater tanks are progressively being retrofitted to 26 amenity blocks on sportsgrounds (including tanks, guttering, toilets). Groundwater is currently supplied to 12 fields in Council's area of operations.
Residential refit program (incorporating residential and Department of Housing programs)	201	This program commenced in January 2003 and provided subsidies to customers for retrofitting water efficient appliances i.e. AAA showerheads, hose trigger nozzles and tap aerators A total of 10,030 residential properties and Department of Housing properties have been fitted in the Gosford and Wyong area of operations. The program has now been discontinued due to the availability of free refit services provided by private sector businesses.
Water recycling project	85	This program is anticipated to be commissioned in November 2008 subject to regulatory approval. Council has upgraded the Kincumber and Woy Woy wastewater treatment plants to provide tertiary treated and disinfected effluent (recycled water) for tanker filling and reticulated customers including sports fields, concrete batching plants and bus washing facilities.
Community water grants	50	Gosford Council has been awarded 40 grants totalling $1.1M to implement water saving, rainwater tank and greywater projects on Council facilities.

Program	Estimated Water Savings (ML/a)	Description
Washing machine rebates	40	The initiative, introduced in May 2006, provided financial rebates of $200 for 5A or 4 star (WELS) washing machine. To date 6,417 rebates have been approved for Council's customers. This initiative is to be discontinued with the introduction of the State Government's rebate scheme.
Amendments to operational procedures to reduce water losses during reservoir and mains cleaning	10	This project involves reusing water flushed from pipes and reservoirs into tankers for non-potable use.
Operational changes to minimise loss of water during main breaks	10 for major mains breaks 50 for normal main breaks	Crews are required to provide a rapid response for reported water leaks.
Council properties water management audits	9	A total of 4,009 Council properties were checked and over 600 detailed water audits have been undertaken. Water savings to date are based on leaks identified and fixed.
Groundwater program for water tankers	5	This project commenced in 2006 and provides groundwater to replace town water from tanker filling stations at Central Coast Stadium and Woy Woy depot.
Rural Fire Services	5	This project, completed in 2006, provides the replacement of town water with groundwater and rainwater for use by the Rural Fire Service for training purposes.
Erina Depot - nursery redevelopment	3	This project, implemented in November 2006, provided for the redevelopment of Council's nursery at its Erina Depot with an objective to make the nursery self sufficient for its water supply. This will be achieved through improved irrigation efficiency. The project was expanded with an additional 90kL of storage to supply tankers for roadside and CBD garden watering.
Erina Depot rainwater tank wash down recycling system	2	This project, implemented in December 2006, provides sixteen 9kL and two 10kL rainwater tanks connected to wash down area for all Council fleet vehicles. In addition,

Program	Estimated Water Savings (ML/a)	Description
		there is also a water recycling system in place to collect and recycle the wash down water.
Water Saving In Schools Program	1.7	Council introduced a water saving initiative for local high schools, primary schools and non-profit early childhood centres and preschools in March 2006. The Water Savings in Schools Program is offering ten grants per year, (up to $5,000 per school), to fund water saving projects. Schools can choose from three standard projects developed by Council including: ▪ smart water meters, ▪ waterless urinals, or ▪ rainwater tanks. Alternatively, schools may propose other water saving projects. For example, refitting water efficient devices such as tap aerators and AAA showerheads. To date 18 project grants have been approved.
Pilot rainwater tanks to high schools pre schools & child care centres	1	Council ran a pilot rainwater tank rebate in schools program (valued up to $15,000). A package was also offered for a private preschool ($7,500) but no eligible applications were received. Tanks were installed at a childcare centre and two schools. Smart water meters were installed at the schools to monitor water savings.
Public education	1	Council has an ongoing commitment to public education on water issues, funds education programs in schools and provides water conservation information at major public events.
Smart water meters	0.2	'Water Guard Units' have been installed on three Council Properties. The units detect leakage and gather detailed water consumption data. This data will be used to monitor the results of water saving initiatives such as refitting water efficient devices, rainwater tanks and improving irrigation efficiency.

Appendix B
Output measures

1 Performance against output measures

In 2006, IPART recommended a number of water output measures for Council to report against during the current determination period. Performance against Council's water and wastewater output measures is reported on in the following sections. Where appropriate, the output measure refers to the main report in order to avoid duplication.

1.1 Joint Water Supply Authority outputs

1.1.1 Completion of the lower Wyong transfer system upgrade

Refer to Section 2.1.6

1.1.2 Completion of the Mooney Mooney transfer system upgrade

The Mooney Mooney Transfer System upgrade will increase the transfer capacity from Mooney Mooney Dam to allow additional pumping during periods of higher inflows. The upgrade requires lowering of the water level in Mooney Mooney Dam and taking Mooney Mooney Dam off-line for several months. It is not prudent to undertake these works until storage levels in Mangrove Creek Dam rise sufficiently to safely take Mooney Mooney Dam off-line. The completion date for this project will be influenced by the completion date of the Mardi to Mangrove Transfer System which will provide the additional security of supply required to enable the Mooney Mooney Transfer System Upgrade to take place. Consequently, this project has been placed on hold and will be reviewed at the completion of the Mardi to Mangrove Transfer System. The relative cost-benefit ratio of this contingency project reduces with finalisation of the Mardi to Mangrove transfer system and will be reconsidered at that time.

1.1.3 Completion of the Mardi Dam raising

This project has been deferred as other projects currently being undertaken, particularly the Mardi to Mangrove transfer system, increase system yield in a more cost effective manner. The Councils are proceeding with the ancillary works associated with this project (widening of the existing spillway and spillway bridge construction) for safety and operational reasons. The future of this project will be reviewed following commissioning of the Mardi to Mangrove link.

1.1.4 Completion of the Mardi high lifting pumping station and associated works

The delivery of this project has been delayed due to modification of scope to achieve cost savings and additional operating benefits.

1.1.5 Completion of the Mardi Dam transfer system

Refer to Section 2.1.6

1.1.6 Substantial progress on the Mardi to Mangrove transfer system

Refer to Section 2.1.6

1.1.7 Completion of the Groundwater contingency scheme

Refer to Section 2.1.6

1.1.8 Completion of the Hunter transfer contingency scheme

Refer to Section 2.1.6

1.2 Water

Table 1 presents Council's performance against the water service output measures.

Table 1: Output measures for water services

Output (or activity) measure - water		Report Value
Renewal of water mains		7.3 km
New mains laid by Council		0 km
Average leakage for	2006/07	-[1]
	2007/08	1.45 ML/d
	2008/09	na[2]
Pumping stations renewed		1
Service reservoirs	Built	0
	Refurbished	10

[1] leakage below measurable levels

[2] information to be provided at completion of 2008/09

1.3 Wastewater

Table 2 presents Council's performance against the wastewater service output measures.

Table 2: Output measures for wastewater services

Output (or activity) measure - wastewater	Report value
Repair and renewal of sewers	67 repairs and 2.5 km of renewals
Comply with DECC effluent standards	Non compliance[1]
KSTP - Renew belt press facility	Refer Section 1.2.1
Make substantial progress on Gosford CBD	Refer Section 1.2.2
Complete Gosford CBD sewer DSP works	Refer Section 1.2.2
Complete North Avoca sewerage scheme	Refer Section 1.2.3
Pumping stations renewed	28 (mechanical/electrical renewals)

[1]Council exceeded its load based licence limit for total suspended solids (TSS) in 2006/07 due to elevated TSS concentrations during a major stormflow event. In 2007/08, Council exceeded its load based licence limit for total nitrogen as treatment processes were unable to remove elevated inflow concentrations.

Project specific wastewater output measures are discussed in the following sections.

1.3.1 Kincumber STP - Renew belt press facility

Council's STPs, at Kincumber and Woy Woy, currently utilise belt presses for dewatering sludge. To improve dewatering efficiencies and provide reliable infrastructure to meet operating needs, it was proposed at the time of Council's last submission to renew dewatering facilities at Kincumber and review options for improving dewatering facilities at Woy Woy. Since the last determination, Council has completed a comprehensive strategic process review for both Kincumber and Woy Woy STP. The review investigated STP performance (operating costs, influent and effluent loads, customer complaints, environment protection licence compliance) process efficiency, physical condition (mechanical, electrical and structural), demographics and available technologies for reliability improvement options.[1] The review provided Council with a number of recommendations for STP improvement. Priority projects are now being undertaken, and have been allocated into programs to match the recommended infrastructure replacement times highlighted in the review process. The STP upgrades include renewal of sludge dewatering facilities.

1.3.2 Make substantial progress on Gosford CBD upgrade and complete Gosford CBD sewer DSP works

The Gosford CBD upgrade is required to accommodate the expected increased populations associated with redevelopment of Gosford CBD in accordance with the Gosford City Centre Local Environment Plan (LEP). The upgrade comprises

[1] MWH 2006 Strategic Process Review of Wastewater Treatment

replacement of water and wastewater pipes, provision of new sewage pumping stations and associated rising mains and the rehabilitation of some wastewater assets nearing the end of their service life. Council had completed the design works for the Gosford CBD upgrade when the adopted developer servicing plan (DSP) for the Gosford CBD had to be reworked due to rezoning of the 2005 LEP by the NSW Minister for Planning in 2007.

The new Gosford City Centre LEP substantially increases the rezoned areas, population density projections and building height and floor to space ratio provisions. The pipeline augmentation requirements for the Gosford CBD have now been redetermined via Wallingford software modelling. A consultant has been engaged to assist with overall augmentation design, estimate and construction assessment issues. The new DSP for the City Centre will be finalised by late 2008. Concept design and detailed design will be staged in conjunction with the proposed construction program. Initial construction stages are anticipated to commence 2008/09, and continue progressively on a yearly basis.

1.3.3 Complete North Avoca sewerage scheme

The North Avoca Sewerage Scheme is part of the Coastal Carrier System (CCS) which conveys wastewater from the catchment areas of Terrigal, North Avoca, Avoca Beach and Kincumber through to the Kincumber STP. The existing system is comprised of major infrastructure components, such as SPS, tunnels, pressure and gravity pipes. Council has identified that certain elements of the CCS require upgrading, mainly due to aging infrastructure and increasing loads associated with population growth. CCS system upgrades and improvements aim to reduce the environmental and health risks posed by the continuing use of the current system configuration. Council has undertaken a number of investigations regarding upgrading the CCS and has now identified a preferred upgrade option which involves diversion of Terrigal and Avoca flow catchments to avoid crossing sensitive coastal lagoons. CCS preconstruction activities have now commenced.

This is a major and complex project covering many disciplines. The process of arriving at a preferred option has taken longer than anticipated due to complexity and amount of work required. The proposed construction work will be required to be carried out in a number of stages over a number of years and completion time will be dependent on resources available.

The capital expenditure for this project has increased since IPART's last price review. The previously advised cost estimates were preliminary and based on an initial strategic options assessment. This initial assessment was refined in June 2006 and identified six options ranging in preliminary costs of $21m to $34m. Further assessment was undertaken to arrive at a preferred option in January 2007 with an estimated cost of $32m. The cost has increased from early preliminary estimations as the scope has expanded and become more defined.

2 Proposed output measures

IPART has requested Council to propose output measures for the next determination period. Council's proposed output measures are presented in Table 3. The measures have been developed with consideration to Council's objectives, which include regulatory compliance, improved system reliability and increased customer satisfaction.

Table 3: Proposed output measures

Output (or Activity) Measure	Report Value
Water	
Water quality complaints	Number
Water main Breaks	Number
Average leakage	ML/d
Renewal of water mains	km
Wastewater	
Wastewater odour complaints	Number
Wastewater main chokes	Number
Wastewater overflows	Number
Kincumber and Woy Woy STP upgrade	Completion
Coastal Carrier wastewater system upgrade	Completion
Comply with DECC effluent standards	All STPs

Appendix C
Forecast water sales

In forecasting Council's future water sales, consideration has been given to the following factors:

- historical metered water sales,
- current and future water restrictions,
- unrestricted water demand estimates,
- water usage behaviour.

1. Historical metered water sales

Council's historical metered water sales, since reaching a peak of 17,051 ML in 2001, have been steadily declining to 12,056 ML in 2008. This decline is predominantly due to water usage restrictions in place since 2002. Historical metered water sales are presented in Figure 1.

2. Current and future water restrictions

At September 2008, the Central Coast water supply system was at 31.3% of total capacity. Given this significantly depleted storage level, it is estimated that it will be a number of years until total system storage reaches a level of 47%, at which time water usage restrictions could be removed.

Council has undertaken a stochastic analysis of water supply system behaviour incorporating recent system upgrades, proposed upgrades and the potential impacts of climate change. Figure 2 details the various probabilities for a range of storage recovery rates based on model system response for 1,000 streamflow replicates. The key variable affecting the rate of storage recovery is climatic conditions influencing streamflows.

From Figure 2 it can be seen that there is a 50% probability of the system recovering to 47% by 2011. Based on a progressive recovery of the system storage consistent with the stochastic analysis for the 50% probability, it is estimated that water restrictions will be progressively eased until 2011/12 when they will be removed.

3. Unrestricted demand estimates

Council's unrestricted demand estimates are based on a rigorous assessment of potable water demands undertaken as part of Council's IWCM Strategy. This investigation identified water cycle issues, analysed historical water usage, examined the impact of demographic changes on demand, ranked water management options

and developed various demand scenarios. Scenario 1 in the IWCM Strategy represents Council's current initiatives and incorporates the demand reduction impacts of appliance water efficiency improvements, BASIX requirements, education, high-water-user management plans, refit/rebate programs, permanent water use behaviour change and recycled water use. Based on the IWCM analysis, a return to pre-drought unrestricted demand levels is considered unlikely due to the water saving measures and behavioural changes that have taken place during the drought. Council's IWCM Strategy has been approved by the DWE. Forecast unrestricted water sales are presented in Figure 1.

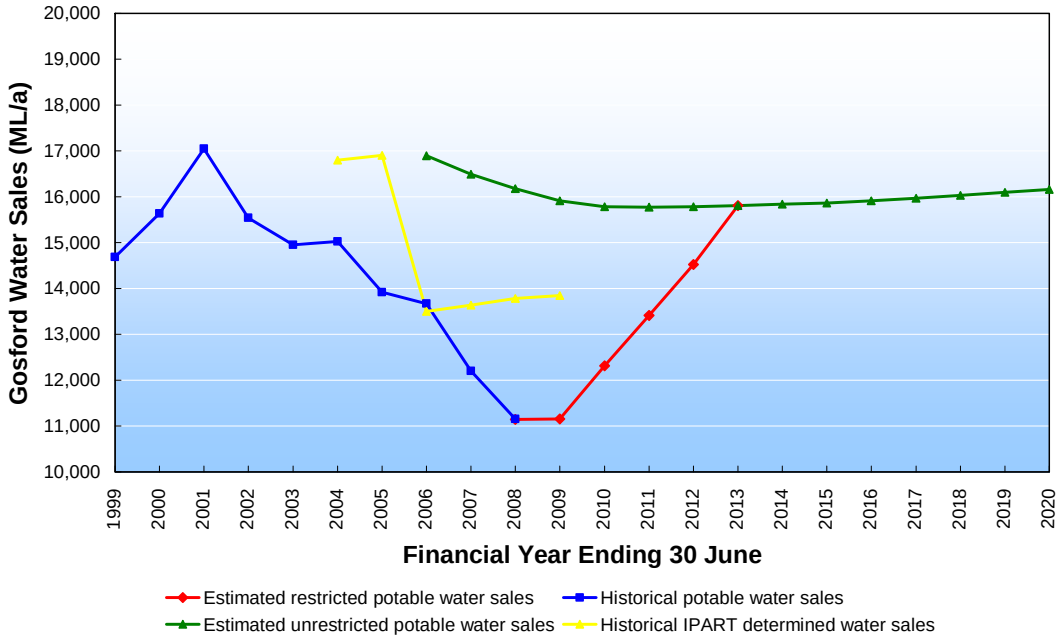

Figure 1: Gosford metered water sales

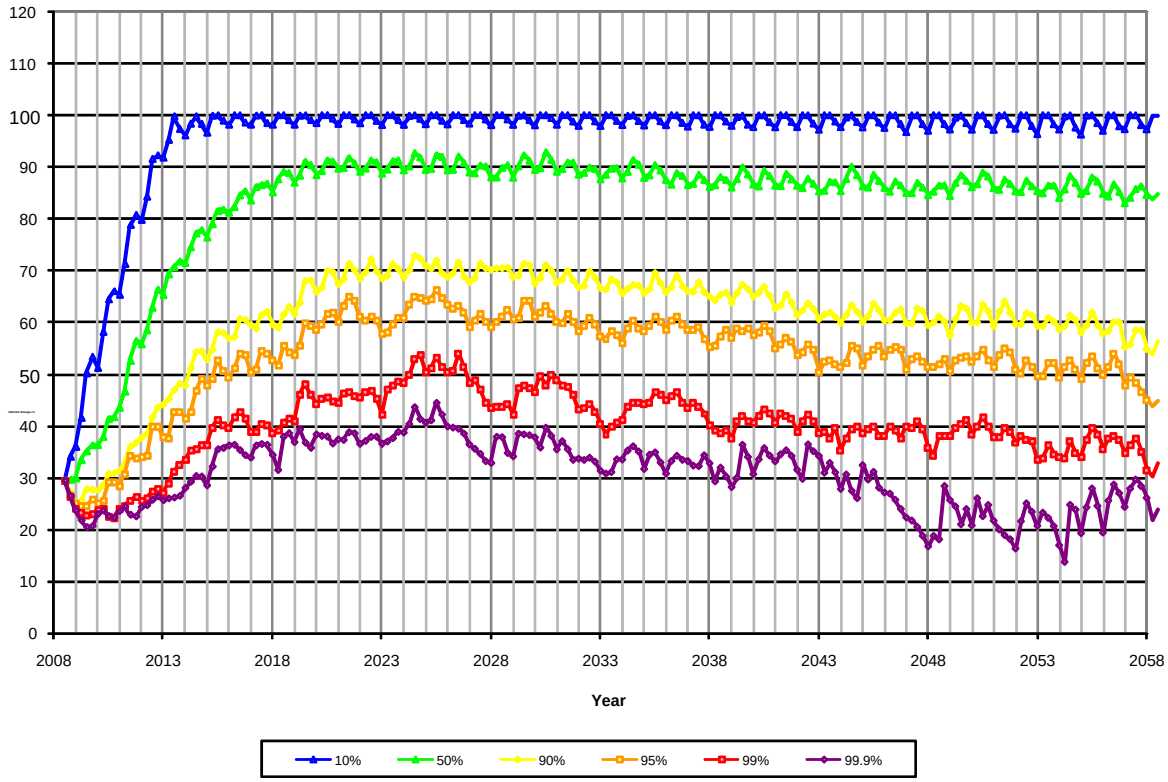

Figure 2: Central Coast system storage stochastic model output

4. Water usage behaviour

The water usage behaviour of Council's customers has been significantly modified during the recent period of protracted drought and associated water restrictions. It is anticipated that the reduced water usage due to behavioural change will continue even as restrictions are eased. Consequently, as water restrictions are progressively eased, a step increase in water sales is not anticipated. The estimated water sales over the next price path are based on a consistent increase (lagging behind easing of water restrictions) from the current water sales to the estimated unrestricted water sales for 2012/13.

5. Forecast water sales

Council's forecast water sales over the price path are presented in Table 1 and Figure 1.

Table 1: Gosford forecast water sales

	2009/10	20010/11	20011/12	2012/13
Residential	10,218	11,129	12,053	13,122
Non residential	2,093	2,280	2,469	2,688
Total	**12,311**	**13,409**	**14,522**	**15,809**

Appendix D
Adjusted revenue requirements

Table 1: Water service

Water service	2009/10 $m	2010/11 $m	2011/12 $m	2012/13 $m
Operating expenditure	19.5	19.9	19.5	17.8
Return of regulatory asset base	3.2	3.3	3.4	3.4
Return on regulatory asset base	15.7	16.7	16.7	17.2
Return on working capital	0.1	0.2	0.2	0.2
Notional revenue requirement	38.5	40.1	39.8	38.6
Smoothed revenue needs	39.0	39.0	39.0	39.0

Table 2: Wastewater service

Wastewater service	2009/10 $m	2010/11 $m	2011/12 $m	2012/13 $m
Operating expenditure	18.8	18.6	18.5	19.4
Return of regulatory asset base	3.1	3.3	3.5	3.7
Return on regulatory asset base	13.9	15.2	16.2	17.1
Return on working capital	0.2	0.2	0.3	0.3
Notional revenue requirement	36.0	37.3	38.5	40.5
Smoothed revenue needs	38.4	38.4	38.4	38.4

Table 3: Stormwater service

Stormwater service	2009/10 $m	2010/11 $m	2011/12 $m	2012/13 $m
Operating expenditure	4.7	4.7	4.5	4.5
Return of regulatory asset base	0.2	0.2	0.3	0.3
Return on regulatory asset base	0.9	1.3	1.7	2.0
Return on working capital	<0.1	<0.1	<0.1	<0.1
Notional revenue requirement	5.8	6.2	6.5	6.8
Smoothed revenue needs	7.0	7.0	7.0	7.0