

## **TILLEGRA DAM - EFFECTS ON A SMALL COMMUNITY**

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### **Paper Summary**

In November 2006, the state government announced its intention to construct the Tillegra Dam situated on the Williams River in the Dungog Shire local government area. The announcement was made without any prior consultation or discussion with affected residents or the Council. It was not part of the State Plan as published in November 2006.

The announcement caused mixed emotions among residents, environmental groups, Council staff and elected members and of course end users who are likely to benefit from the end product.

The Tillegra Dam proposal is not new, being 'on the books' since the 1950's. Hunter Water Corporation has always advised that it was part of its future plans to construct a new dam in the Williams Valley but as recently as 2003 had advised Council that the proposed dam was still a long term option and not on its present 20 year strategic planning horizon.

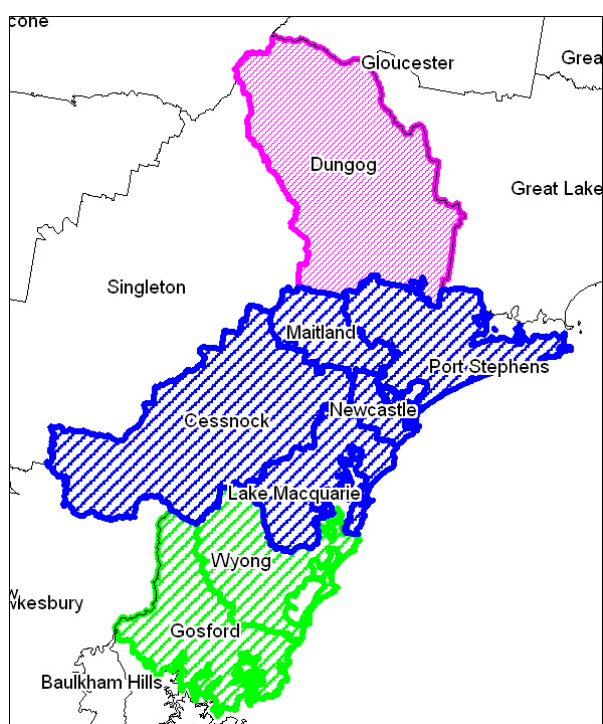
The announcement caused immediate concern with Council who have spent in the order of \$1,000,000 in recent years on road and bridge replacement works which will become inundated at the completion of the new dam. In addition, there are significant issues in relation to continued access to the top end of the Williams Valley (linking to the Barrington Tops), future tourism potential of the dam, effects on property owners in the inundation area, effects on dairying industry and flow on effects to the townships within the shire.

Since the announcement, the Hunter Water Corporation has begun discussions with affected residents, concerned landholders, environmental groups and Council to 'thrash-out' the issues and work towards a solution that is acceptable to all parties.

The intention of this paper is to present an overview of the dam, the issues faced by Council as a result of the dam construction, including new tourism strategies, economic development strategies, asset replacement and compensation issues and to highlight the issue of communication between the state government, Council and the residents of the shire.

## Introduction

The Hunter Water Corporation services the local government areas of Newcastle, Lake Macquarie, Port Stephens, Maitland and Cessnock. It provides full water and sewer services to residents in these areas. In addition it provides water in bulk to Dungog Shire Council and also to Gosford and Wyong Councils via a link in the southern area of its operations to supplement their present storages. Dungog, Gosford and Wyong Councils are local water utilities and manage the water reticulation and sewerage operations within their respective areas.



**Fig 1- Hunter Water area of Operation**

Water for Hunter Water's operations is sourced from Chichester Dam, the Tomago sandbeds and the Williams River. Tables 1 and 3 below show the total storages and annual supply from these storages to the network.

Water is sourced directly from Chichester Dam and piped to Dungog where it is treated and piped to Hunter Water's area of operation. Dungog Council has three connections to Hunter Water's supply to provide bulk water to its customers.

In addition, water can be released from the Chichester Dam into the Chichester and

Williams Rivers where water can be extracted from the Williams River at the Seaham weir and transferred into the Grahamstown Reservoir. This reservoir has little to no catchment and is an offline storage reservoir from the Williams River.

The Tomago sandbeds are a source of groundwater covering an area of approximately 106 km<sup>2</sup> north of the Hunter River.

At the time of writing, there were no water restrictions in Dungog or the Hunter Water's area of operations.

The Williams Valley at Tillegra has been identified since the early 1950's as the next location for a new dam if and when required.

## Storage capacities and levels

Table 1 shows the existing capacities of Hunter Water's Storages.

Storage location <sup>[1]</sup>	Full Capacity (ML)	% capacity January 2007
Chichester Dam	20,300	92%
Grahamstown Dam	131,800	85%
Tomago sand beds Storage	64,100	57%
<b>Total Storage</b>	<b>197,930</b>	<b>77%</b>

**Table 1 – Hunter Water Storage capacities**

National Water storages throughout Australia in January 2007 were much less than Hunter Water's as shown in table 2 below.

Percentage Storage capacity	Locality
77%	Hunter Water
55%	Adelaide
38%	Canberra

38%	Melbourne
35%	Sydney
27%	Perth
24%	Brisbane
15%	Central Coast

**Table 2 – National comparative storage levels<sup>[2]</sup>**

In terms of supply, table 3 shows the typical volume of water provided to Hunter Water's area of operation from each of its sources.

<b>Storage location<sup>[1]</sup></b>	<b>Annual supply to network (ML)</b>	<b>Percent supply to network</b>
Chichester Dam	30,000	40%
Grahamstown Dam	25,000 – 35,000	30 – 45%
Tomago sand beds Storage	9,000 – 25,000	10 – 30%

**Table 3- Hunter water storage utilisation**

In addition to the above supplies, the link between Hunter Water's network and the Gosford and Wyong Council's system is transferring approximately 27 ML / day with augmentations to provide up to 35 ML / day. This is approximately 30% of the Gosford and Wyong Council daily demand and almost 50% of the daily demand while under water restrictions.

### **History of the Dam**

Since the 1950's, Hunter Water have tried to construct another dam in the Williams Valley at Tillegra to augment storage. Locals were successful in defeating the proposal in the early 1950's but were always aware that the proposal was still Hunter Water's preference when additional storage would be required.

Again in the early 1970's the Tillegra Dam was proposed albeit the proposal was for a smaller dam than Chichester at the time.

In the period 1999 to 2004 Hunter Water were actively purchasing property in the inundation area whenever land became available for sale. This land was leased back to property owners with Hunter Water claiming they had no immediate need for the land but were land banking in readiness for the new dam.

In 2003 Dungog Council, in reviewing its road and bridge rehabilitation program, identified considerable works in the vicinity of the dam and some works within the inundation area. This work included the replacement of three timber bridges with concrete structures and considerable road rehabilitation. Correspondence between Council and Hunter Water resulted in Hunter Water advising that the Tillegra Dam was still the preferred location for a new water storage, however it was not part of their present 20 year strategic planning. This advice was confirmed again in 2004 and as such Council has expended \$1,000,000 on bridge replacements in the last two years that are in the inundation area.

In November 2006 the State Government announced that the new Dam would proceed. The announcement was made without any consultation with Council or residents.

### **History of events leading to announcement**

Considering the history in the years before the announcement, Council and residents found the announcement to be somewhat of a shock as all indications were that the dam was not needed at present and that the site was only being considered in strategic terms.

In the months preceding the November 2006 announcement, the following activities occurred.

The Gosford and Wyong Councils considered desalination plants as a solution to their water storage issues as they were at about 15% storage in August 2006.

In August 2006 the Gosford – Wyong Council’s Water Authority Board meeting recommended to both Councils that a temporary desalination plant be installed with a capacity of 2ML/d at Budgewoi Beach South. Wyong Council adopted the recommendation while Gosford Council adopted the recommendation with an additional resolution that the installation only be utilised as a last resort to maintain storage levels above 10%. A development application has been submitted by the Councils for this plant to be constructed.

In August 2006 the Premier released the draft NSW State Plan for comment. There was no mention of the new dam in the draft Plan. The Premier intended to consult with Major stakeholders regarding issues in the plan with a release date prior to the end of the year.

A number of embarrassing events for the state government occurred in the lead up to the Tillegra Dam announcement including;

- October 25<sup>th</sup> 2006, Carl Scully (Police Minister) was sacked after misleading parliament.
- 30<sup>th</sup> October 2006, Bob Debus (Attorney-General and Environment Minister) announced he would step down at the next election.
- 5<sup>th</sup> November 2006, Phil Koperburg (RFS Commissioner and labour party candidate for the Blue Mountains) tarnished by allegations of domestic violence.
- 6<sup>th</sup> November 2006, Aaron Beasley (Port Stephens labour candidate) withdraws his nomination after being caught drink driving.
- 6<sup>th</sup> November 2006, Kerry Hickey (Minister for Local Government) admits to four speeding offences.
- 7<sup>th</sup> November 2006, Milton Orkopolous (Minister for Aboriginal Affairs and member for Swansea) arrested in relation to child sex and drug charges.

- 13<sup>th</sup> November 2006, Milton Orkopolous sacked.

On the 13<sup>th</sup> November 2006, Morris Iemma announced the new Tillegra Dam and drought proofing package for Hunter and Central Coast.

The following day, on the 14<sup>th</sup> November 2006, Morris Iemma releases the State Plan. There was nothing in the State Plan to indicate that the Tillegra Dam was to proceed.

**Dam details**

The announcement by the State Government in November 2006 stated that the proposed dam at Tillegra will have a capacity of 450,000 ML. In comparison, this is 20 times larger than Hunter Water’s existing dam at Chichester and will more than triple the present total storage capacity.

The cost of the works were estimated at \$300 million. In addition to this work, additional work to increase the pumping at Balickera Canal (to pump from the Williams River to Grahamstown Dam) was announced at a further \$7 million, and an augmentation to the existing link from Hunter Water’s network to Gosford and Wyong’s system at an extra \$9 million.

Table 4 details some of the statistics relevant to the new dam

Volume	450, 000 ML
RL of full supply	154m AHD
Height at wall	60 m
Area of inundation at full level	1900 Ha
Estimated cost of project	\$300,000

**Table 4 – relevant statistics of proposed Tillegra Dam**

It is estimated that there are approximately 100 parcels of land affected by the dam and that these parcels are held by approximately 50 separate owners. The size of the dam relative to the shire and Chichester dam can be better appreciated in fig 2 below.

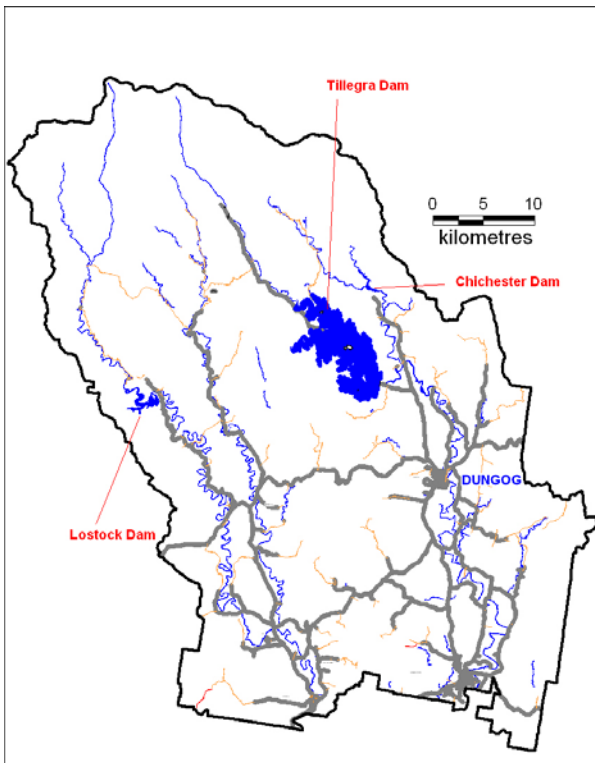


Fig 2 – Proposed location of Tillegra Dam in Dungog Shire

## The Planning process

The planning and assessment process for this project will be carried out under Part 3A of the Environmental Planning and Assessment Act 1979 and the State Environmental Planning Policy (Major Projects) 2005 (SEPP).

Effectively this means that Council will not be directly involved in the assessment and approval of this project. The application will be lodged by Hunter Water Corporation, the project will be processed and assessed on behalf of the Minister by the Director General of the Department of Planning with final approval by the Minister.

### **What is the 3A approval process?**

Section 3A is a recent addition to the Environmental Planning and Assessment Act that works with State Environmental Planning Policy (Major Projects) 2005 to outline the assessment process for what can generally be described as major development projects in NSW. The Major Projects SEPP identifies development to which the development assessment and approval process under Part

3A of the *Environmental Planning and Assessment Act 1979* applies.

With regard to this proposal, there is no direct reference to dams in the schedules of the Major Projects SEPP, however Section 75B of the EP&A Act provides that the Minister may, by Ministerial Order, declare a project to be a development to which Part 3A applies.

There are four types of approval within part 3A:

- (i) Project approvals;
- (ii) Concept approvals;
- (iii) Critical Infrastructure approvals;
- (iv) Major Infrastructure approvals.

A formal application for the project has not been lodged, however it is expected that when this occurs, the Minister will declare the dam a Major Infrastructure Project. The Minister also has the option at this stage to declare the dam a Critical Infrastructure Project. There are a number of differences in the approval process for these two declarations.

Major Infrastructure development is defined as including development whether or not carried out by a public authority for the purposes of roads, railways, pipelines, electricity generation, electricity or gas transmission or distribution, sewerage treatment facilities, **dams** or water reticulation works, desalination plants, trading posts or other public utility undertaking.

A Critical Infrastructure Project is a development that is declared to be development that the Minister regards as essential for economic, environmental or social reasons. (Section 75C)

If the dam is listed as a Critical Infrastructure Project, this will exclude proponent or objector appeals to the final determination by the Minister (Sections 75K, 75L and 75Q). It also excludes all environmental planning

instruments other than SEPPs that specifically relate to the project and Council orders (Section 75R). In addition, this classification excludes third party appeals against the project under the *Environmental Planning and Assessment Act 1979* or under environmental protection legislation (Section 75T).

If the project is assessed as a Major Infrastructure Project, appeals can be lodged against the determination. Any appeal however can only relate to the process, not the merits of the determination.

***What is the environmental impact assessment process?***

Prior to consideration of the proposal, the proponent (HWC) must undertake and provide an environmental assessment. Under Part 3A, the Director General will provide a list of requirements that must be covered in this assessment.

In preparing these requirements, the Director General must consult the relevant public authorities and consider the inclusion of any key issues raised by those public authorities. (A public authority is defined under the Act to include a local authority in this case Dungog Council). The Department of Planning has advised that with a development such as the proposed dam, the Director General would also require community consultation by HWC. Issues raised in this consultation would also be considered in compiling the requirements for environmental assessment.

The proponent (HWC) must then complete the environmental assessment report in accordance with the requirements and submit it to the Director General.

Once accepted by the Director General, the environmental assessment report will be placed on exhibition for a period of at least 30 days. During this time any person, including a public authority, may make a written submission to the Director General. Copies of these submissions will be provided to the proponent or any other public authority the Director General considers appropriate (Section 75H EPA Act1979).

At any stage of the process, the Minister may constitute a panel of experts representing the Department and other relevant public authorities to assess any aspect of a project (Section 75G). This cannot include officers having regulatory functions in connection with a project which may exclude Council officers from appointment to such panels.

Once submissions close, the Director General may require the proponent to submit a response to the issues raised in the submissions (Section 75H (6) EPA Act1979)

A final report is then submitted by the Director General to the Minister. This report must contain;

- any advice provided by public authorities, including Council (Sections 75I, 75J EPA Act1979),
- an assessment of the environmental impact of the project, (in accordance with the DGs requirements, including impacts of the development on the natural and built environment and social and economic impacts in the locality)
- any aspect of the public interest that the Director General considers relevant to the project,
- the suitability of the site for the project and
- copies of submissions received by the Director General in connection with public consultation or a summary of the issues raised in those submissions (CI 8B EPAR 2000).

The Minister is to consider the Director General's report on the project and any reports, advice and recommendations contained within the report. If approved the project may be modified or subject to conditions as determined by the Minister.

***Community input into the assessment process***

Council, effected landholders and the community have already had a number of meetings with Hunter Water Corporation to raise concerns in relation to the proposal. It is

expected that this communication will continue as issues arise.

In relation to the actual assessment and approval of the project however, there are two stages in this process where Council and the community can have an input.

As outlined above, the first opportunity for community input is when nominating issues to be covered in the proponent's environmental assessment report. The regulations require that the Director General must finalise these requirements within 28 days of them being requested by the proponent. This is a brief period for such a complex proposal and it is important that potential impacts of the project are considered now.

At the moment it is unclear how the community will be consulted on the requirements for environmental assessment. One forum could be the Community Reference Group, another option for other groups and individuals not involved with this committee will be through Council.

Once the application is lodged, it may be helpful in considering the issues, to request that the Director General provide a draft of the Department's environmental assessment requirements. This would assist Council and the community in identifying gaps in the requirements rather than covering issues that have already been identified.

The second opportunity for input into the process is when the proposal is placed on public exhibition. At this stage any individual, group, or authority can make submissions. The exhibition time is for a minimum of 30 days, however this may be extended by the Minister.

### **Construction time frame**

The construction time frame at this stage is for an application to construct to be made by April 2007. Following this Hunter Water needs to undertake the necessary studies prior to gaining final approval and beginning construction. It is understood they wish to

commence construction in late 2008. Construction is expected to take 3 to 5 years with filling being dependant on rainfall events but expected to be a further 3 to 5 years.

### **Community Issues**

There are a number of issues facing the community. These issues are affecting different people in different ways and Council has had a number of community meetings to attempt to identify all issues. The major issues identified to date include:

#### **Property acquisition and owner displacement**

Directly affected residents have been sent letters from Hunter Water stating they will negotiate payments with them to December 2007. If agreement on buy out can not be reached between them then compulsory acquisition will commence. Residents have the option of leaving immediately or remaining on the property after the sale for a period of time, subject to a lease agreement with Hunter Water.

A number of residents have expressed a wish to remain on their 'dry' portion of their land, however there is no mechanism in Council's planning process and Local Environmental Plan to allow subdivision of the land below the minimum lot size that would allow owners to re-build on higher ground out of the inundation area.

Property owners are facing a number of concerns in relation to the present Superannuation rules. Present superannuation rules make provision for a undeducted (after – tax) contribution of up to \$1,000,000 prior to the 1<sup>st</sup> July 2007, however after this date, lump sum payments will be limited to \$150,000.

In some cases, particularly younger owners, the proceeds from the sale will be utilised to purchase another property, however a number of property owners are considering purchasing a smaller residential property in town and retiring from farming. As such, they need to consider the taxation implications of the superannuation rules prior to the 1<sup>st</sup> July 2007. This deadline is adding another

degree of stress to an already emotional incident in these people's lives.

Another emotional issue affecting property owners is the occurrence of a number of family members residing on individual parcels that were once the original family holding. In this instance the parents may still be residing on the property, but the land has been divided among the adult children to operate as they see fit. The offers of sale are causing family tension as different family members negotiate differently with Hunter Water and the family comes to the realisation that the family will unlikely to be able to reside together, as it has previously, as opportunities to purchase new farms will unlikely be available for all family members in the one locality. Families are coming to the realisation that they will be separated.

#### **Recreation**

Hunter Water presently prohibits any recreational activities on its water sources at Chichester and Grahamstown dams. These dams provide water direct to pipelines which do have a number of raw water customers and as such the maintenance of the water quality at its highest level is important.

The new dam will be used to store water and release that water into the Williams River for extraction at Seaham weir. As such the community are urging Hunter Water to consider the allowance of recreational activities on the dam including fishing, sailing, power boat use and picnic use in addition to the possibility of eco-tourism development placed around the dam.

At this stage Hunter Water have advised that they are willing to consider this as an option. Dungog Council sees the use of the dam for recreational purposes a significant benefit to the community and a way in which some of the economic and social disadvantages can be partially offset.

#### **Road access**

Road access to the area of Salisbury (above the dam) will be completely cut off due to the flooding of the valley. This area is the link from the Dungog Shire to the Barrington Tops, and a number of tourist developments

already exist in this area. It is imperative that good road access is maintained to this part of the shire. Hunter Water have advised that they recognise the need to construct a new road to maintain access to this area and have commissioned GHD to investigate relevant routes. There will be additional parcels of land isolated by the flooding and these may also require new road access.

#### **Planning and zoning of surrounding land**

A number of property owners would like to remain on their property that remains above the inundation level. Council's Local Environment Plan (LEP) 2006, does not allow subdivision of the land in 1(a) zoned areas to be less than 60 ha. In many cases the parcels of land being acquired by Hunter Water will result in only small portions remaining above the water line, certainly less than the 60ha minimum. Council has no planning strategy at this stage to allow those parcels to be further subdivided.

#### **Technical issues (Dam break / geology)**

A number of the residents downstream of the dam have raised their concern in regard to the structural security of the wall and have raised issues of geological faults in the vicinity of the wall. At this stage Hunter Water have agreed that the dam will only proceed subject to satisfactory geological reports and the concurrence of the Dam Safety Committee.

#### **Compensation for lost assets**

Council has written to Hunter Water twice in the last few years raising the issue of the proposed Dam and the likelihood of it being completed in the near future. The last correspondence from Hunter Water dated April 2004 advised Council "...the construction of a dam at Tillegra is not expected within a 20-year planning horizon. Tillegra however, remains the favoured site for a new dam, should one be required to augment the supply of water to the Lower Hunter community in the future."

In addition, Hunter Water advised Council that "Given that the potential dam project is beyond the 20-year planning horizon, there is not yet a firm compensation policy on such



issues.” Council has concerns that while alternative access will be provided, Council will still be paying of loans associated with the construction of bridge assets that no longer exist.

The issue of compensation is one that still needs to be addressed.

**Compensation for lost rates (\$80,000) and developer charges**

Hunter Water Corporation have been paying rates on land owned by them in the inundation area, however their legislation exempts them from paying rates once the land becomes operational. Council estimates that there will be a loss of approximately \$80,000 per annum in lost rates. This is equivalent to about 1% of the present rate income.

Further, as Council is not the approval authority, it is unable to levy any development charges on the developer for increased traffic generation during construction.

Council is endeavouring to secure an annual payment from Hunter Water to offset the lost rates income and lack of developer charges.

**Compensation for damage to Council roads during the construction**

Council owns a number of facilities and assets in the inundation area. These include significant lengths of road, bridge structures, fire sheds and cemeteries. As part of the project, Hunter Water will be required to either compensate Council for these structures or replace them in a suitable location. In respect to roads, continued vehicular access will be required to all property owners both during construction and after the project is complete.

**Increase in economic activity during construction and decrease during filling period.**

There is a recognition that during construction there will be an increased economic activity in the locality due to construction workers taking up residence in the shire and a number of businesses will flourish during this period, however there will also be a rapid reduction in economic activity

while the dam fills. With no construction work during the filling stage and affected property owners moved out of the area the Council has serious concerns about the economic effects on businesses and families in the towns.

**Social, economic and tourism effects**

Council has identified concerns regarding social, economic and tourism effects and has requested that Hunter Water undertake studies into the magnitude of these issues for the three phases of construction, filling and operation of the dam.

Council has written a brief to engage a consultant to undertake these studies as part of the planning process required by NSW Planning. The costs of the studies will be met by Hunter Water.

It is expected that these studies will make a number of recommendations in relation to economic, social and tourism effects in the shire and methods of rectification where it is shown that these effects are detrimental to the residents within the shire.

**Funding of the works**

The project will be funded by a combination of contributions from Gosford and Wyong Council, an increase in developer charges of approximately \$1,000 per lot created and an increase in existing customer bills by an average of \$0.40 per week per customer.

No State Government funding will be provided to the project (despite their advertising claims).

**Conclusion**

Throughout the last 60 years the Tillegra Dam has been an option to provide additional water to the Lower Hunter. The intention of the dam, however was always to provide water to the **lower hunter** and as such even Hunter Water estimated that the time for the new dam was in excess of 20 years. It is clear that the Tillegra Dam proposal was never anticipated to be commenced so early,

and that factors such as the Central Coast's water supply situation and an unfortunate fortnight in November 2006 for the state government has resulted in this dam being brought forward for political reasons rather than rational reasons.

The community of Dungog Shire feel helpless as they watch the state government take measures to flood a beautiful valley to provide water to people that have no affiliation with the shire at all.

With the knowledge that the dam was an afterthought of the government following a bad fortnight of press and that the number of votes in the Williams Valley can never outweigh that of the Central Coast's population, the feeling of utter frustration that funds such as this can be spent in a kneejerk reaction can't be expressed in this paper.

Knowing that there are other technologies available to the Central Coast to provide their water makes the decision to continue with the dam appear even more reckless.

### **References**

1. Hunter Water Corporation, [online], [www.hunterwater.com/catchmentinfo.asp](http://www.hunterwater.com/catchmentinfo.asp)
2. Hunter Water Corporation, "SPLASH", Summer 2007, p3.

## **Author Biography**



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