

Dam management

Waimea Community Dam Limited (WCDL) was set up as a shell company under the direction of Waimea Water Augmentation Committee (WWAC) in May 2011. The principal reason for the creation of WCDL was that a legal entity was required to carry out the resource consenting.

A governance model for the ongoing management of the dam is in development. WWAC's aim has always been that this will be community owned, self-sustaining and not for profit. It has always been the preference of WWAC that water users pay their fair share. It has never been a recommendation that the community subsidise irrigators.

Work is being done around land acquisition and also in relation to the resource consents. Once the consenting phase is complete it is possible the project could be "parked" until a workable funding model is achieved. However, this is not a preferred option as the cost of any project of this nature is likely to increase significantly over time.

Cost

It has always been known that finding a fair and affordable funding model would be the greatest challenge for this project.

That is still a work in progress, however WWAC is clear in the view that the cost of not progressing the dam would be much greater for the Nelson-Tasman region.

It is important to remember that if this project's costs were viewed over the 100 year timeframe it would become clear that this is relatively cheap when compared with a number of Council's other activities – notably the cost of running and maintaining libraries.



Waimea Water Augmentation Committee (WWAC)

Comment from Lindsay McKenzie, CEO Tasman District Council

We've known since 1985 that we have been using more water on the Waimea Plains than is there and since the drought of 2001 we've been trying to find a way to make sure there will be enough water to go around in the future for both urban and rural users.

To compound things, it is forecast that our water situation is going to get worse in the future. The Ministry for the Environment predicts that by 2090 climate change is going to cause slightly more rainfall in heavier bursts and it is also tipped to double the time we spend in drought every year. This will make water storage more critical.

Over the last 18 months much of the conversation around the Waimea Dam has been centred on whose interests it is serving. That is frankly not the issue and diverts the focus from what really needs to be done – find a sustainable solution for all parties, not just irrigators:

- Making sure there's enough water in the Waimea River so plants and wildlife can survive downstream and in the inlet
- Making sure there is enough water for people living in Richmond, Hope, Brightwater, Redwood Valley and Mapua over the next 100 years.
- Recharging the river and underground aquifers in a drought
- Providing water in the river for summer recreation
- Providing water for productive industries on the Waimea Plains.

Some people say the lack of water is the irrigators' problem and urban people don't need to worry about water. This is a very narrow view and one of the biggest misconceptions around the project.

We have to face the fact that the problems of supplying water to our homes and to our biggest industries are problems for us all.

All of the current water permits start to expire from 2016.

If a decision is made not to proceed with building a water storage dam severe water restrictions will begin for everyone. Denying the opportunity to provide a relatively cheap and safe water management system will see greater domestic rationing. Those in and around Richmond may be used to rationing for a couple of weeks most years. Without a dam the new water allocation and supply limits along with the increasingly regular dry summers will see those rationing weeks increase to months.

In the urban areas, without the Waimea Community Dam:

- Any new commercial venture will be limited to 15m3 per day, effectively limiting or preventing any high water use propositions.
- There will be no water for growth in Richmond, Hope, Brightwater and Mapua other than for the land that is currently zoned residential or deferred residential and there will be no relief for the Redwood Valley rural water supply scheme.
- The more severe the drought the more likely the Council will have to adopt drastic measures to comply with its own consented allocations
- To continue to supply water and avoid the worst impact of restrictions Council will have to find alternative supplies which on a unit cost basis will be more expensive than the current option on the table. Any such solution will not benefit any other interests (ie environmental, cultural and productive water users)
- Any alternative supplies are unlikely to provide the level of security of supply to support urban growth.

Security of the urban water supplies is one of the Council's big issues. Without guaranteed water our economy is going to be in serious trouble. That will affect land prices and rates as well.

This is the dam that nobody wants to pay for but which everybody needs. It's like insurance. You don't want to have to call on it and you hate paying for it. But you end up being very grateful it's there!

View reports and progress on the project on the WWAC website www.waimeacommunitydam.co.nz or on the Tasman District Council website www.tasman.govt.nz/link/leedam

If you would like to receive your future WWAC newsletters via email please notify Committee Secretary Valerie Gribble - valerie.gribble@tasman.govt.nz.

This project is funded by:

- Tasman District Council
- Nelson City Council
- Waimea Plains water users and landowners
- Community Irrigation Fund
- Fish and Game New Zealand Nelson Marlborough Region

In kind support is received from:

- Iwi
- Department of Conservation

Keep up to date by searching for "Lee Dam"



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WWAC members are available to answer your questions.

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What is the issue?

In the summer of 2000-2001 there was a severe drought which saw the Waimea River run dry.

As a result there was also salt water intrusion in the underground aquifers under the Waimea Plains along the coast down lower Queen Street. Several wells were affected including Council's Waimea Water supply wells of which two had to be shut down.



Murray King,
Chair WWAC

Council was already aware that the available summer water resource was over-allocated and it became abundantly clear that, without some form of water augmentation to secure a reliable water supply, the economic viability of businesses on the Waimea Plains would be severely undermined and its own community water supply needs would also be constrained. This would immediately have a flow on effect to the entire region as the productivity of the plains drives a major part of the region's economy and supports significant employment and growth.

Water rationing

This is an example of the real impacts of the rationing that will apply without augmentation of the water supply.

Zone	Delta
Soil type	Waimea
Crop type	Apples
Irrigated area	12.5 ha
Maximum weekly consented rate	4375 m ³
Maximum weekly usage between 2002/03 to 2012/13	5024 m ³
Indicative allocation upon review*	3750 m ³
* This was based on soil type rate of 300m ³ /ha/wk multiplied by the area, which is a 14% reduction from the maximum consented take and 25% reduction from the maximum weekly usage.	

Zone	Golden Hills
Soil type	Waimea
Crop type	Berries
Irrigated area	21.0 ha
Maximum weekly consented rate	7350 m ³
Maximum weekly usage between 2002/03 to 2012/13	7447 m ³
Indicative allocation upon review*	6090 m ³
* This was based on crop type rate of 290mm/ha/wk multiplied by the area, which is a 17% reduction from the maximum consented take and 18% reduction from the maximum weekly usage.	

% cut	Number of days impacted by rationing for each irrigation year												
	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
20	9.3	26.7	15	16.4	22	27.9	28.3	29.5	20.9	18.4	19.3	4	19.8
50	10.3	25.3	24.6	7.3	14.6	43.8	39.4	28.4	3.4	3.9	12.9	0	20
70	87.2	0	35.5	0	0	22	0	1.9	0	11.3	3.2	0	0

What is the situation?

The Waimea Plains is the food bowl of the Nelson Region. The water which supports that production is pumped either directly from the Waimea River or from underground aquifers that are directly linked to the river flow.

Urban water supplies also come from this water system. Users who take water from this supply are required to have a permit. Council is the single largest permit holder for its urban water supply.

All permit holders are subject to rationing during times of drought however the minimum allowable flow in the river is 250 l/s. This was the informal minimum flow from the 1980s and is manifestly inadequate for any form of instream habitat or saltwater intrusion protection. A revision was sought to increase this to 500 l/s in the late 1990s however this was strongly resisted by submitters. The subsequent drought in 2001 further highlighted the severity of the water shortage and at that time the community backed investigations for augmentation rather than immediately cutting back water allocations severely.

Under the new (2014) Tasman District Council Water Management Plan, and without augmentation of the existing water supply, the rationing all water users will be subject to will be significantly greater than has previously been experienced as the minimum target allowable flow in the river has now been set at 800 l/s.

Council responsibility

Under the Resource Management Act Councils have a responsibility to manage their natural resources in a sustainable way.

The more recent National Policy Statement 2014 compels council to set limits to sustainably manage their water resources and requires Council to address overallocation in their regions. In 2001 when the matter came to a head it was known that it was only a matter of time before a minimum allowable flow in the Waimea River would be imposed that would result in severe water rationing and likely lead to a fight for access to that limited resource.

That has now come to pass with the TDC Water Management Plan 2014 – which is yet to be implemented.

Council also has an obligation to safeguard the economic and social wellbeing of its communities so a solution is required to meet the needs of a diverse range of interests including environmental, cultural, recreational, social and economic.

In an effort to find a solution to the water issue that didn't see those competing interests going head to head over what is a scarce resource a diverse group, representing those interests, was formed to try and find a solution. A moratorium was agreed at that time that would enable the group time to explore the options and come up with a feasible solution.

If a water augmentation dam is not built this issue will remain and Council and the community will need to find some other

solution to the region's water shortage. WWAC believes a dam in the upper Lee Valley is the most cost effective option available and has completed exhaustive work to get to this point.

WWAC acknowledges that cost and funding for the dam is a significant hurdle and that the community has not yet been presented with a workable funding model. However we also believe that the cost of not progressing this project will be much greater in the long term.



Waimea River at the Appleby Bridge in drought in February 2001

Looking for a win-win solution

The Waimea Water Augmentation Committee (WWAC) was given the mandate to find a solution to the acute water shortage on the plains.

WWAC was formed in 2001 and has met regularly since then. It has representatives from all of the irrigation zones on the Waimea Plains, Department of Conservation, Iwi, Fish and Game, Tasman District Council and Nelson City Council. It is important to note Nelson City Council's interest in terms of both its own security of water supply and also the potential impacts on the regional economy.

WWAC has accessed the range of available central Government funding to assist the work that has been completed to date via the Community Irrigation Fund. WWAC has also maintained relations with the various Government Ministers, ensuring they are fully briefed on the issues and the project's progress to best position this project for any available central Government assistance.

The first phase of WWAC's work was to look at the widest range of options for water augmentation.

This included:

- piping water from outside the district
- creating small on-site dams on the plains
- weirs in rivers
- creating large dams and reservoirs in a range of locations

After exhaustive study the most cost-effective option was found to be a dam in the upper Lee Valley.

This dam would store water during winter months and release that water back into the natural river flow during times of drought. (Note: All reports in relation to this work are available on the TDC website.)

From there, extensive investigation was undertaken by WWAC into the suitability of that location for building a dam, including looking into the flora and fauna in the area and the geological suitability of the location.

Engineering consultants have designed the proposed dam structure to the highest international standards. The information has been assessed by independent commissioners. Their support for consenting of the dam is endorsement that the investigation and dam design are robust and meet the highest standards.

The dam size and 100 year water demand has been determined by a collaborative process involving often conflicting interests – such as environmental versus economic. Ultimately those interests have wanted to achieve the same end goals that would see all interests satisfied.

The process developed by WWAC has been held up nationally as a model for good collaborative governance.