

# LIVING WATER SMART IN BRITISH COLUMBIA – ACTIONS FOR WATER EFFICIENCY

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## ABSTRACT

Dynamic river systems and iconic lakes and fisheries are part of British Columbia's identity and quality of life. Like New Zealanders, British Columbians value their water bodies and are passionate about improving the way they are managed. However, unlike New Zealand, British Columbia has widespread heavy industry and resource extraction activities, the added layer of federal government, an old and complex legal framework, and a mind-boggling variety of native species ranging from grouse to grizzlies all relying on healthy watersheds.

Living Water Smart is British Columbia's Water Plan. In it, the BC provincial government has committed to 45 actions or targets to keep British Columbia's water resources healthy and safe. British Columbia has an ambitious target to improve water efficiency by 33% by 2020. After outlining some important contextual differences, this paper describes the efficiency measures in the plan and progress to date. In addition, it outlines British Columbia's proposals to modernize their outdated *Water Act*, focusing on proposals to improve both administrative and water use efficiency. Lessons and recommendations from British Columbia's experience that could be adapted to the New Zealand water governance and management context conclude this paper.

## KEYWORDS

Water efficiency policy British Columbia legislative reform

## 1 INTRODUCTION

While a visitor to British Columbia (hereafter BC) may draw similar conclusions to those of a visitor to New Zealand, there are important differences in the two places from a water governance and management perspective. Both places have picturesque landscapes and an abundance of natural features of which their demographically-similar populations are very proud. Both rely on the health and sustainability of their natural and physical resources for both resource-reliant and tourism-based economies. However, the way water is consumed, managed and governed is different and both are changing.

## 2 THE BRITISH COLUMBIAN CONTEXT

### 2.1 GEOGRAPHY, CLIMATE AND POPULATION DISPERSION

British Columbia (BC) and New Zealand share geographic features such as high mountain ranges, dynamic river systems and numerous lakes. However BC is spread over a vast area 944,735 km<sup>2</sup>s compared to NZ's compact 268,021 km<sup>2</sup>s (Wikipedia). In addition, 94% of BC's land area is owned by the government, some of which is leased for forestry, mining and oil and gas activities. 12.5% is protected by conservation designations and about 5% is designated as Agricultural Land through the Agricultural Land Reserve. Farming and cattle ranching is common in the southern parts of the province, forestry activities cover the province, and oil, gas and mining activities are mainly in the centre and northern areas of the province.

The southern “lower mainland” and coastal parts of the province enjoys a temperate climate, with high rainfall and sunshine hours. Importantly, this area relies on snowmelt from the Rocky and Coast Mountains for freshwater and there is low rainfall during the summer months June – September. It is a completely different story in the Interior and the Northern areas of the province. These are arid regions, with temperatures well below freezing in the winter and very hot and dry in the summer. Water storage is becoming increasingly necessary to adapt to impacts of climate change as precipitation patterns are changing, annual snowfalls and snow-packs are decreasing and winter temperatures are rising – in some areas by around 3<sup>0</sup>C (see figure one) (Pacific Climate Impacts Consortium). Climate change scenarios predicts that summers will become hotter, longer and drier, with longer periods of low flow and droughts becoming more frequent (see Rodenhuis *et al* 2007 for a fuller discussion on climate change impacts on British Columbia’s hydrology).

Figure 1: Rain and snow projections in BC



Source: [Pacific Climate Impacts Consortium](http://www.pacificclimate.org/)

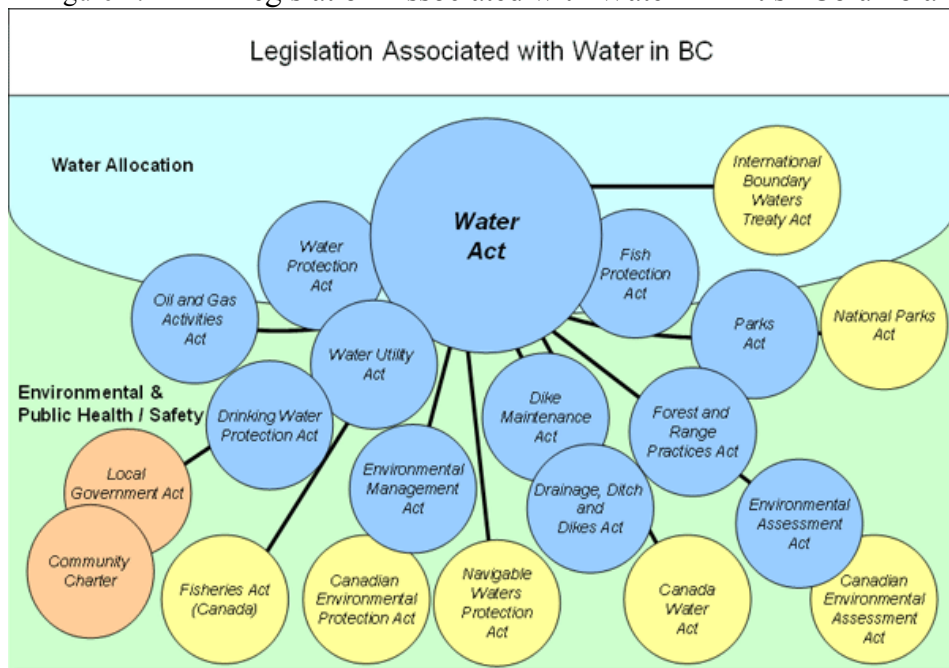
While actual population numbers are similar (NZ’s 4.3 million compared to BC’s 4.45 million (BC Stats), the dispersion of BC’s population is concentrated in the southern part of the province and concentrated in the lower mainland region near Vancouver and the southern tip of Vancouver Island. More than two thirds of the province is sparsely populated; many of the northern communities are dominated by First Nation settlements with resource extraction providing the primary economic base (forestry, oil, mining or gas). Disparities in population size and wealth, as well as significant geographic challenges creates cost and access issues for infrastructure such as that needed for transportation, communication, water and energy supplies.

## 2.2 WATER GOVERNANCE DIFFERENCES, NEIGHBOURS AND FEDERAL JURISDICTION

To compare BC and New Zealand’s water governance framework is to compare the two ends of the governance spectrum. While NZ has a very devolved framework, BC has a traditional top-down system of water governance determined by an often out-of-date and fragmented set of laws primarily controlled by the provincial and federal governments. For example, water licence decisions for

allocation, storage, diversions and works are made under the 101 year old *Water Act* on a first-in-time, first-in-right basis. Decisions are made by the Comptroller of Water Rights or delegated to five Regional Water Managers, usually with little or no community consultation outside of the fiduciary obligations with First Nations. Permits to discharge to water are determined through different legislation - the *Environmental Protection Act* - by a different set of decision makers. Bulk water export and inter-basin transfer are prohibited through the *Water Protection Act*. There are many other Acts (see figure two below) that influence water and many government departments making decisions which can result in a slow and inefficient service. Policy and law reform is lead by the head office based in Victoria, the capital of BC, with *ad hoc* consultation. There are recent efforts to co-ordinate provincial decisions for multi agency and large industrial projects.

Figure 2: Legislation Associated with Water in British Columbia



Source: Ministry of Environment (BC)

In addition, BC is rather unique with respect to its groundwater resources, which remain largely unregulated, despite their importance as a water resource and to protect water flows and temperatures needed for salmon habitat. There are an estimated 200,000 wells in BC, many of which are in shallow and unconfined aquifers with interconnections with surface water resources. Even in watersheds under significant stress, groundwater access is still a free for all, with no licences, few environmental assessments and little oversight or monitoring required. Due to a lack of monitoring of groundwater withdrawals or wells it is unknown how many wells are actively withdrawing water.

British Columbia shares borders and water resources with a number of neighbouring jurisdictions and has several water related agreements with Alberta to the east, Northwest Territories, Yukon and Alaska to the North and Washington and Oregon to the south. In addition, the federal (national) government has many responsibilities for water that impact how water and the environment is managed. Of major significance are the Fisheries and Oceans Canada responsibilities for marine waters and all fish and fish habitat, and Environment Canada’s responsibilities for environmental and climate change monitoring, national parks management and species at risk. Local governments are largely responsible for community planning and development, the provision of drinking water supplies and management of storm water and waste water.

## **2.3 203 FIRST NATIONS WITH VARYING AGREEMENTS WITH THE PROVINCIAL GOVERNMENT.**

Canada's First Nations have a government-to-government relationship with the Federal Government of Canada. Section 35 of the *Canadian Constitution Act* (1982) establishes the foundation for aboriginal rights and provides constitutional protection for the aboriginal and treaty rights of First Nations peoples in Canada. Also under the constitution many resource management decisions are vested in provincial and territorial governments such as the BC government. Tensions about the adequate implementation of constitutional requirements and protection of First Nation interests by provincial governments have risen in recent decades, especially over resource management decisions.

It is common in Eastern Canada for Crown –First Nation relationships to be formalized by historic Treaties. However, in BC the majority of First Nations do not have any formal Treaty with the Crown to formalize rights, title and areas of interest.

The BC government has made a number of resource management decisions that have been legally challenged by First Nations in recent years. Challenges usually focus on claims of inadequate consultation and a lack of appropriate accommodation of Aboriginal rights and title. Various land-mark cases have resulted in court-defined obligations to consult more broadly and fully with First Nations about projects that may affect their lands and territories. First Nations are also seeking more co-management and revenue sharing agreements. In practice, capacity and resourcing to hold adequate consultations for both the First Nation and the provincial government are still limited, often resulting in distrust and conflict. Co-management and revenue-sharing agreements are still uncommon.

## **2.4 A SIMILAR MYTH OF ENVIRONMENTAL HEALTH AND WATER ABUNDANCE**

Like New Zealand's clean green image, BC's image is dominated by its natural beauty. The moniker "Beautiful BC", or "BC – the Best Place on Earth" adorns every vehicle licence plate and government service, sign, or publication. Lovely lakes and running rivers that have bears feeding off of plentiful salmon belie the truth behind the campaigns. In reality there are hundreds of species at risk and water bodies and major fisheries are under threat from over exploitation, habitat destruction and pollution (MOE 2010b). Of particular concern are iconic and culturally significant fisheries such as the Fraser Sockeye Fishery which has declined alarmingly in recent years. Environmental protection measures are often poorly resourced and at odds with other government priorities such as sport and commercial fisheries, mining, and developing oil and gas extraction activities.

British Columbians are among the largest consumers of water in the world – their per capita average is estimated at 490 litres per person per day (MOE, 2008). This figure is 60% higher than the OECD average and excludes water licensed for agriculture, mining and other industrial or commercial purposes (MOE, 2008). British Columbians do not commonly have water saving appliances or fixtures in their homes and buildings. In addition, water licences generally do not expire or come up for review. Currently, licences do not require efficiency gains or metering meaning there are few incentives for water users to conserve.

While there is plenty of water stored in lakes, rivers and glaciers, there is much less water supply available where and when it is needed. Most of the water in BC flows north - the opposite direction to the water demands of the population and economies based in the south. British Columbian thought leaders commonly call this "a myth of abundance" and blame it for the lack of conservation of water resources. Shortages and restrictions are common in the summer months, straining natural water bodies and local government infrastructure.

### **3 LIVING WATER SMART - A COMMITMENT TO CHANGE THE WAY WATER IS MANAGED AND GOVERNED**

In June 2008, the BC government released Living Water Smart: BC's Water Plan. It includes a comprehensive range of commitments that signalled the provincial government's intent to rethink the way water is managed and governed in British Columbia. With five implementation categories and 12 ministries involved in its implementation, the plan is an ambitious government undertaking. The targets for the delivery of commitments span from 2010 to 2020. The Water Stewardship Division of the BC Ministry of Environment (MOE) is responsible for the coordination of the plan's implementation as well as the delivery of many actions including the reform of BC's *Water Act*.

It is recognized that government action is only part of the solution. By using a plain English and accessible communications style, the plan includes a call to action for all British Columbians to get involved in protecting, conserving and sustaining their water and water bodies. There is a particular focus on enabling individuals and sectors to undertake water efficiency actions. The plan and vision received broad support in BC and across Canada although many British Columbians are waiting to see how the implementation of the plan will affect them.

Living Water Smart has five implementation themes that cover a broad range of water policy and action. The themes are:

1. Efficiency, outreach and public awareness
2. Governance, legislative and regulatory change
3. Science, education and learning
4. Watershed planning and protection
5. Community planning and development

The scope of this paper is limited to the first two.

#### **3.1 EFFICIENCY, OUTREACH AND PUBLIC AWARENESS**

Living Water Smart outlines two important targets for achieving improved water efficiency by 2020. One is a provincial target that BC will be 33% more water efficient and the other that 50% of future municipal demand will be met by conservation. These are considered 'stretch targets' and mirrored the greenhouse gas (carbon dioxide) reduction targets outlined in the climate action plan released earlier by the same government. Actions to accompany and help achieve the water efficiency targets involve different sectors, and partnerships are fundamental in order to achieve real progress. This section will focus on the progress already achieved on actions for government, local government, the agricultural sector and individual action in the home.

##### **3.1.1 GOVERNMENT PARTNERSHIPS**

When developing Living Water Smart, cross government partnerships were sought and actions spanned several areas. For example the Ministry of Housing that administers the Building Code updated their regulations to require low flow and dual flush toilets and water efficient fixtures in new homes and renovations. They are also working on ways to encourage dual plumbing (purple pipes) in homes. The Capital Planning office in charge of provincial assets now has a policy to build or renovate to LEED gold or equivalent standards for both energy and water efficiency. The Ministry of Energy, Mines and Petroleum Resources, through their mandate for energy efficiency, is making links to the energy consumed in water heating, transportation and treatment. Working with the Ministry of Education resulted in a commitment to bring more water education into the curriculum.

One of the most beneficial partnerships is with the BC Ministry of Community and Rural Development who provide infrastructure grants to local governments. They have developed several very forward-thinking policies including:

- Requiring a council-approved water demand management plan as an eligibility criteria for water-related infrastructure grant applications

- Clarifying that infrastructure to increase water supplies will not be funded unless demand-side (or water conservation) options have been maximised
- Outlining an ‘integrated resource recovery’ direction and encouraging local government engineering to integrate assets to look for energy and water savings and recover wastes to make them into resources, and
- Providing tools to make water demand management plans and argue business cases for water conservation to locally elected decision makers.

For more information visit [http://www.cd.gov.bc.ca/lgd/infra/resources\\_from\\_waste.htm](http://www.cd.gov.bc.ca/lgd/infra/resources_from_waste.htm) and [http://www.cd.gov.bc.ca/lgd/infra/infrastructure\\_grants/index.htm](http://www.cd.gov.bc.ca/lgd/infra/infrastructure_grants/index.htm)

### **3.1.2 LOCAL GOVERNMENT ASSISTANCE**

Local governments are an important partner in delivering water efficiency. Communication with local government was considered a key priority in developing and implementing Living Water Smart, and partnerships with key bridging groups assisted the province. One group, spearheaded by a few key influencers - the Water Sustainability Partnership involved a mix of provincial and local government engineers and asset managers. This group actively pursued the development of practical decision support tools and information sharing opportunities to improve water conservation and better manage rainwater.

British Columbian planners and developers now have access to the Waterbalance Model, which can model different development scenarios and determine ways to keep the water balance as close to natural as possible. For example using one of three scales (site, large development, or watershed) one can model the impact that green roofs, retention ponds or wetlands, roadside swales or permeable parking lots will have on the water balance that might have naturally occurred.

Local governments can see how best to reduce their water demand using the Water Conservation Calculator which models and calculates the savings from possible conservation measures in homes and communities. It helps water demand managers argue the business case for soft-side demand management initiatives rather than supply-side infrastructure. This calculator also embeds the energy savings possible from reduced treatment and pumping costs. Open source technology has been employed and there are opportunities to adapt these web-based tools for the New Zealand context.

### **3.1.3 AGRICULTURAL WATER USERS**

In some parts of the province, such as the Okanagan Basin, agriculture accounts for more than 70% of the water used. Out of the 44,000 active water licences, there are a great number of Agricultural water licences; some of them dating back more than 120 years. Licences are commonly called ‘water rights’ and they are considered property rights which can only be applied to the land to which they are ‘appurtenant’. In addition, many older licences do not have review or environmental protection clauses. However, in times of drought or severe stress to fish stocks the government can order reductions. Like New Zealand, BC’s farmers have an important political presence and food security is an emerging provincial concern. This makes change and adaptation very difficult.

However, the imperative to adapt to changing water supplies has never been greater and the agricultural sector is very aware of this need. Working in partnership with the Ministry of Agriculture, several actions to inspire or require water use improvements are being pursued including:

- Modelling agricultural land use to understand actual agricultural water demands,
- Identifying the areas where storage will be required under climate change scenarios
- Partnerships for irrigation technician and installation certification schemes (Irrigation BC)
- Requiring metering for large water users

- Investigating how to reserve water for use on the Agricultural Land Reserve (approximately 5% of BC is designated as Agricultural land, however much of this land is underutilised as water licences have not been granted)
- Agricultural farm planning to educate farmers on better water use practices
- Providing Irrigation Scheduling tools (Irrigation BC and Farmwest), and
- Making changes to the *Water Act* to require efficiency gains (explained later).

Farmers in British Columbia can access and tailor to their needs an online Irrigation Scheduling Calculator that picks up real time climate data and evapo-transpiration rates. This data is fed into a user-generated farm model that includes parameters for soils, crops, and irrigation systems. There are also opportunities, with relatively little cost, to share this tool with New Zealand farmers.

### **3.1.4 BRITISH COLUMBIANS AT HOME AND AT WORK**

The huge variety in water resources across the province means that there is varying awareness at an individual level about the impact that everyday actions have on water resources. Accessible language and outlining practical actions are a key principle in Living Water Smart communications. This has been especially important during public outreach in order to help people make the best everyday decisions for water sustainability. In addition, ‘wow’ facts and statistics have been used to help debunk the myth of abundance.

Actions that have directly encouraged action in the home include:

- Significant public awareness raising about the Living Water Smart plan and the website during the first year
- Development and distribution of the Living Water Smart home water assessment through educational, non-governmental and municipal partnerships, and rewards for action
- Low-carbon lifestyle assessments, with water conservation education and rebates for energy efficient appliances through the LiveSmartBC program and in partnership with the Federal ECOenergy program
- Requirements for low flow toilets, showerheads and taps through the BC building code
- Promotion of ‘green’ buildings and developments
- Water efficiency labelling for water consuming appliances (this is being developed across Canada)
- Use of social media and internet to provide information on practical action, and
- Municipal water conservation programs, rebates and water restrictions.

In addition to the sector-based actions for water efficiency, it was recognized by government that the new policy direction needed to be supported by laws and regulations to help inspire or, if needed, require water sustainability. With few existing legal incentives to conserve water or protect ecological needs, it was clear that the regulations needed modernizing so water managers could require efficiency and the protection of stream health.

## **3.2 GOVERNANCE, LEGISLATIVE AND REGULATORY CHANGE**

At the heart of BC’s water governance framework is one of the province’s oldest pieces of legislation, the *Water Act* which, among other things, determines how decisions should be made for water allocations, diversions, storage, changes in and about a stream and works required to access water. As noted earlier, BC employs a first-in-time, first-in-right system of water licensing which has largely remained unchanged since the gold rush days more than a century ago. This means in a time of drought or low flows, newer licences are fully reduced before older licences are affected; the actual purpose of use has no bearing on reductions. Conflicts are increasing between older irrigation licencees (especially landscape irrigation) and newer or municipal licencees who believe their need is greater, or their use is more efficient. For more information about BC’s water law framework and history visit <http://www.livingwatersmart.ca/water-act/>

Environmental protection and First Nations rights or practices are not mentioned in the *Water Act* and nor is the extraction of groundwater regulated. As a result, in times of low flow, fish habitat is often compromised and water temperatures are too hot during critical spawning periods. Water licences in BC do not have an expiry date (with the exception of new hydro power projects). Reviews to water licence terms and conditions are administratively burdensome and uncommon, there is no recourse available for over pumping groundwater, and requiring water reductions carries an expectation that the licensee will be compensated.

Climate change impacts and hydrological modelling show that water supply patterns are changing, droughts will become more common, and low flow times will be longer, making water related issues even more frequent. Water managers and users need better regulatory tools to adapt and deal with increasing conflicts and to respond to modern expectations such as protecting the ecological functions of streams.

In addition to water use conflicts and dealing with climate change, BC's population is growing and government is looking at ways to streamline resources and reduce administration costs. The population of BC is expected to grow by 1.4 million people by 2030 (BC Stats) and much of this growth is expected in already water short areas.

To respond to these issues and as a major part of implementing Living Water Smart, the BC government launched an initiative to modernize the *Water Act* by 2012 (MOE 2010a). Four goals underpin the scope of the review:

1. Protect stream health and aquatic environments
2. Improve water governance arrangements
3. Introduce more efficiency and flexibility into the water allocation system
4. Regulate groundwater (extraction and) use

Being more efficient from both an administrative and water use perspective as well as adapting to climate change are underlying objectives for all four goal areas.

### **3.2.1 PROTECT STREAM HEALTH AND AQUATIC ENVIRONMENTS**

The first goal seeks to establish and apply instream flow needs for all water licensing decisions. This would enable water managers to require water reductions to protect stream health, as well as be clearer about how much water is available for water allocation. The use of watershed based allocation plans was also proposed under this section changing the individual, stream-by-stream approach currently in place and allowing for more efficient decision making. In BC there are almost 5000 streams that have restrictions of reserves on them (MOE 2010a). A 'fully recorded' status means that future water allocations are limited and streams are likely fully or over allocated. This status may not have taken ecological water needs or broader watershed health needs into account and does not consider the impact of changing hydrology.

The second goal aims to enable water governance changes and is somewhat outside of the scope of the focus on water efficiency.

### **3.2.2 INTRODUCE MORE EFFICIENCY AND FLEXIBILITY INTO THE WATER ALLOCATION SYSTEM**

The third goal outlines potential changes to the water allocation system in BC that may require users to update their practices, collectively share or reduce in times of low flow. The current onus on government having to prove impacts and make all licence changes is burdensome and costly to government and is considered too slow, bureaucratic and officious to many water users and potential applicants. This goal also investigates the potential for users to make more changes to their licence, including transfers, and terms and conditions.



Having a legally protected permitted level of water use (for example domestic or stock needs) was also raised but many British Columbians thought this reduced their right to the water. As part of this goal metering requirements were also consulted on as measuring water use is considered important information and is needed before the potential of other regulatory tools can be realized. For example, water users in BC are expected to make beneficial use of their water for the purposes outlined in the licence. However, beneficial use has not yet been defined to include efficient practices; meters are seldom in place to help show compliance; and declarations of beneficial use are not commonly requested.

Many licensees with older rights have reservations about new requirements and any changes to the first-in-time, first-in-right system. Users are concerned about the costs of metering, upgrading their infrastructure or changing their business practices to become more efficient – or to protect the environment.

### **3.2.3 REGULATE GROUNDWATER EXTRACTION AND USE**

Finally the fourth goal seeks to regulate groundwater extraction and use in priority areas and for large withdrawals. As mentioned this is a clear policy gap that the government is looking to close, particularly in watersheds under significant stress. Conflicts between groundwater users and licensed surface water users have been increasing over recent years (MOE 2010a). Also there is mounting pressure on the groundwater resource in areas where surface water resources are at or near their allocation limits. Salmon rely on base flows of groundwater to regulate the temperature of water during spawning and at critical fish rearing times. In the past there has been opposition to regulating the use of groundwater and issues with a lack of scientific information on which to base decisions. Metering and efficiency measures proposed under the third goal, such as those relating to metering and efficient practices would also apply to future groundwater resources.

Much of the goals and objectives of the *Water Act* Modernization initiatives rely on users becoming more efficient. Considering the degree of restrictions and reserves currently in place limiting future allocations, changing water supplies and the need to protect ecological functions, efficiency gains are needed in order for BC's water resources to be sustainable for the future.

## **4 RECOMMENDATIONS FROM THE LIVING WATER SMART EXPERIENCE**

### **4.1.1 WRAP ACTIONS UP IN A COMPELLING VISION**

Make the vision for water sustainability compelling, accessible and generally agreeable to your audience. People are passionate about water and providing a vision that normal people can relate to (and have actually read) meant that people and agencies wanted to be a part of it. Governments are often accused of being *ad hoc* and lacking vision. New and existing actions from across government can help to achieve the vision and keep it fresh. Support the vision with appealing communications and resources.

### **4.1.2 CROSS GOVERNMENT ACTION AND SENIOR LEADERSHIP**

Ask other agencies or departments at a senior level what they can do to integrate water conservation or protection into their business. Ask them to sign off and be accountable for what they have agreed to. While twelve ministries being involved in the plan's implementation took a bit of time to coordinate, it also meant that water sustainability was "on the radar" of more than the traditional agencies and was mentioned more often through media releases and briefings. Using partnerships key linkages were also able to be made between energy and water.

#### **4.1.3 LOOK FOR DIFFERENT DELIVERY AGENTS AND CHAMPIONS**

Enable everyone to do something. Doing business differently was a core part of the Living Water Smart implementation. Appealing for help and new partners in different places resulted in some surprises and access to different social networks. There were also a few ‘champions’ who came forward and helped distribute and educate the plan and vision to their networks. Unfortunately, after the economic downturn and budget cuts there was very little funding to progress some of the great ideas and initiatives that came forward and some partnership initiatives were cut.

#### **4.1.4 USE UP TO DATE AND ACCESSIBLE TECHNOLOGY**

Recent efficiency measures and tools developed in British Columbia are forward thinking and use up to date technology to help aid communication and uptake. Online tools and models are useful as they can appeal to a wider audience and they require fewer resources to maintain. While there are still some people who don’t want to change as well as areas of the province that lack internet access, this is reducing. Please enquire with the author about opportunities to access and utilise several of the tools discussed in this paper and tailor them to the New Zealand context and audience.

#### **4.1.5 LINK THE PURSE STRINGS TO THE DIRECTION**

Making sure government funding was linked to, and helped achieve the direction really helped show government was serious. It also helped support those who were heading in the right direction. Recognition in the form of prizes also helped show support for green buildings, developments and integrating local government assets to achieve water and energy conservation.

#### **4.1.6 LEGISLATIVE CHANGE MAKES THE DIRECTION REAL**

The vision and voluntary tools only take you so far and they only appeal to some audiences. Having commitment to use legal mechanisms to implement commitments and targets made many other audiences sit up and take notice. While the carrots need to be in place, the sticks also need to help out. Legislative tools should require people to value water and the environmental services provided, and provide adequate incentives to comply. Many of the legislative tools currently available to water managers were designed for a different time, when water shortages were uncommon, environmental protection was not considered important and licences were fewer. Embedding review of laws and decisions made under the laws are crucial to take advantage of better technology, respond to changing values and ways of doing business and increase penalties for non compliance.

### **ACKNOWLEDGEMENTS**

Thanks to Lynn Kriwoken, Zita Botelho, Ian Graeme and the rest of the Innovation and Planning team, Water Stewardship Division, Ministry of Environment, British Columbia

Mike Wei – Head of Groundwater, Water Stewardship Division, Ministry of Environment, British Columbia

Ted van der Gulik, Senior Engineer, Ministry of Agriculture and Lands, British Columbia

Thanks to peer reviewers Larissa Coubrough, Hawkes Bay Regional Council and Kirk Stinchcombe, Econnics.

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