

Cardrona Catchment Minimum Flow Workshop #1 (21 June 2010)

Community held values

Water is seen as the lifeline and heart of the community; economically, culturally and socially, and the river is one to be proud of. Both historically and present day, the catchment provides a corridor linking communities within Central Otago.

The following table contains the thoughts and comments expressed by participants at the first minimum flows workshop:

KEY VALUES	Current	In the future
<i>Historical value of water</i>	The use of water has always been important and is evident from the diversity of activities within the catchment. Water has been used for many years and all of these uses have had an impact on the river e.g. gold mining (including water races), agricultural, gravel extraction and tourism.	
<i>Cultural / social</i>	<p>The river is seen as the focal point of the Cardrona and Wanaka townships, supporting vibrant communities and the lifestyle of those within them. Aesthetically, the scenery provides a backdrop to these communities, as well as enhancing the thoroughfare between Queenstown and Wanaka.</p> <p>Historically, tangata whenua knew the river as the “dry Cardrona” because those traversing the trails to the west coast, via the Cardrona, would enter the valley looking for water and find a dry riverbed.</p> <p>The reality of the river running dry is seen by some in the community as a natural event and acceptable. Others are concerned about the effect a dry river has on their lives.</p>	<ul style="list-style-type: none"> ▪ Maintain community water supply ▪ Retain public access to the river and ensure it is not fenced off ▪ Limit further domestic development (split opinion within the community on this issue) ▪ Maintain the character of the catchment and retain the ability to trace the history of vegetation and land use change e.g. initial matagouri / spear grass landscape, then impacts of pastoral farming, followed by the introduction of ski fields and associated infrastructure.
<i>Water quality</i>	The community is proud of the quality of the water in the catchment.	<ul style="list-style-type: none"> ▪ Maintain high water quality for swimming, drinking and restrict any activities that may impact on this aim. ▪ Economic uses need to be undertaken in such a way that protects water quality i.e. through shared responsibility and a community approach.

KEY VALUES	Current	In the future
<i>Economy (general)</i>	The Cardrona supports a number of direct and indirect uses of the water, i.e. irrigation, recreation, tourism and domestic supply. Many employment opportunities are created by the ability to take water.	<ul style="list-style-type: none"> ▪ Assist economic growth with sensible allocation of water. ▪ Keep the doors open for new or expansion opportunities e.g. horticulture. ▪ Manage the risk of competition between domestic, urban and rural users of groundwater.
<i>Agriculture</i>	<p>Water is viewed as the lifeblood of farming activities in the catchment supporting agriculture and good land husbandry. In such a dry environment, irrigation is seen as essential for agricultural sustainability and that any reduction in the ability to access water would impact on the ability of current farming operations to continue. The traditions of agriculture and family histories and lifestyles are an important part of the fabric of the catchment.</p> <p>Efficient use of the resource enables a mix of different uses at different times. Water use technology and subsequent efficiencies can be seen as both good and bad - more efficient use means the ability to irrigate more land but potentially puts more pressure on the resource.</p> <p>The protection, and realisation, of the investments that have been made into irrigation plant and infrastructure, both on and off-farm, is important.</p>	<ul style="list-style-type: none"> ▪ Continuation of current activities, including the ability to store water and irrigate. ▪ Ability to apply for water for any block of land within the catchment. <p><i>Growth Opportunities</i></p> <ul style="list-style-type: none"> ▪ Growth of farming opportunities and the economy i.e. more profitable farming - more prosperous community - more business in area. <p><i>Risks to growth</i></p> <ul style="list-style-type: none"> ▪ Residential and farming land use conflicts. ▪ Inability to take and use water when needed. ▪ Reduction in the amount of water that can be taken. ▪ Potential inability to store adequate quantities of water within the catchment.
<i>Tourism</i>	The impact of tourism in the catchment has increased over previous years. Some of the tourism opportunities offered include: Ski fields, horse riding treks, mountain biking tours, guided fishing tours, 4WD adventure exploration and hunting. Tourism relies, in part, on the catchment's aesthetic value i.e. the concept of the meandering river, willows and green pastures (created by irrigation). Increasing visitor numbers could potentially impact on this image.	Increasing tourism opportunities and a change in land use for tourism.
<i>Gravel extraction</i>	Gravel has been taken over the years and is an important resource within the catchment.	Continued ability to extract gravel.

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<i>Environment</i>	<p>The environment of the catchment is very dry with sections of the river behaving differently from each other. Much of the water available in the catchment is groundwater and aquifer out-flows (in the form of springs) flow through Cardrona, Wanaka and Albert Town. The view that the river runs dry naturally was expressed by many. However, the increasing length of time the river stays dry, the adverse effects caused by users of the dry bed i.e. dust from gravel extraction or recreational activities, and impact on aesthetics are also of concern. This situation may improve with planting of additional riparian areas which play a role in providing habitat, fish food, shade and flood protection (when managed).</p> <p>The region's aesthetic value and the role of the river in maintaining this is seen as important however it was questioned whether there would be significantly more value aesthetically from making the river flow from headwaters to the Clutha River / Mata-Au. There are varying opinions regarding this including the point that a flowing braided river has value.</p>	<ul style="list-style-type: none"> ▪ Keep the current flow levels i.e. status quo. ▪ Increase water storage for flood water harvest allowing more water to remain in the river providing flow regulation and in-stream habitat. Ensure winter flows for spawning and maintenance of fishery. ▪ Have a well managed catchment which is not aesthetically degraded and has scope for enhancement e.g. river work to retain the current course and landscaping. ▪ Ensure that the river bed is tidy, and invasive weeds and pests are controlled e.g. broom, rabbits. <p><i>Risks</i></p> <ul style="list-style-type: none"> ▪ Increasing demand for water putting strain on the resource. ▪ Potential impacts of climate change.
<i>Biodiversity</i>	<p><i>Birds</i> – herons, dotterels, shags, seagulls, plovers, oystercatchers, stilts, and falcon are present in spring and summer especially on the irrigated pastures. Birds nesting on the dry river bed are often disturbed by activities such as gravel extraction and recreational activities.</p> <p><i>Native fish</i> - Juvenile long finned eel (historically), Koaro and Clutha flathead galaxias have been found in the Cardrona main stem</p> <p><i>Trout</i> – the catchment is identified as an important for trout spawning / rearing. Populations of trout have existed for many years and have increased in the last 10 years to a healthy stable level. It was suggested by some that the Matukituki and Makarora Rivers were more important spawning and juvenile fish habitats, while others feel the Cardrona was important and this aspect should be protected.</p>	<ul style="list-style-type: none"> ▪ Maintain the existing ecosystems through good practises and appropriate water management. ▪ Improve tree and riparian habitat for birds. ▪ Protect native fish and introduced/sports fish populations.

<p><i>Recreation</i></p>	<p>There are many recreational activities that occur at various times during the year. Some occur all year round while others are seasonal. The value of the river for these activities is evident. Although putting a monetary value on the economic value of water for recreational purposes is seen as difficult.</p> <p><i>Winter - Snow based recreation</i> i.e. Cardrona and the Snowpark.</p> <p><i>Summer</i> – Historically, anglers have been coming to the river for many years thereby adding to the fabric of the community. <i>Fishing</i> occurs predominantly in the middle to upper reaches of the catchment however, the area is not seen as a big fly fishing river in comparison to other rivers in Otago. <i>Swimming / water based recreation / picnicking</i> occur throughout the catchment particularly in the upper valley above The Larches and tributaries.</p> <p><i>Year round</i> - The public strip alongside the river provides not only for public amenity but also as a valued walkway. <i>Horse riding</i> and <i>dog walking</i> occurs along Ballantyne Road stretch of the river except in summer when the stretch dries out and trekkers traverse other routes. Other recreational activities taking place in the area include:</p> <ul style="list-style-type: none">▪ <i>Hunting</i> (rabbits)▪ <i>Mountain biking</i> and <i>cycling</i> especially along the route up the valley and the Crown Range▪ <i>Motorbikes/4WD</i> use in the lower stretches of the river (especially when river is dry).	<p>There is a desire to have the same activities as currently available. Along with this the need for more bike tracks / walking tracks was expressed however, there are opposing views as to the positive and negative impacts of having more tracks. Increasing water storage may potentially create additional fishing and swimming opportunities.</p>
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Future water management in the Cardrona

The need for consensus on the future management of the catchment's water resource, and the idea of an integrated catchment wide approach to water management which allowed for flexible local solutions to new opportunities, was identified.

<p><i>Integrated catchment management of water</i></p>	<p><i>Opportunities</i></p> <ul style="list-style-type: none">▪ Ensure no more water allocated as primary and reallocate the current water as the community sees fit e.g. through a water allocation committee or water management group.▪ Ensure the Landcare Group remains actively involved in decisions regarding management of river.▪ Provide for water storage opportunities (individual and catchment wide e.g. dams and tanks).▪ Manage the river environment and aesthetics for activities such as tourism and recreation.▪ Efficient individual and community water use. Increasing population and changing land uses means a need for change in how water takes are used i.e. energy efficiency, and reduction of by-wash created by excess abstraction and irrigation practices.▪ Maintain good water quality. <p><i>For future generations</i></p> <ul style="list-style-type: none">▪ Reduce the situation of over-allocation to a realistic level.▪ Provide for community wealth, wellbeing and health.	<p><i>Risks to growth</i></p> <ul style="list-style-type: none">▪ Reduced river flows.▪ Inability to take and use available water when needed.▪ Reduction in the amount of water consented to be taken.▪ Increased residential demand for water and potential increased impacts on water source.▪ Conflict between residential demand and farming uses▪ Impacts of breaching the minimum flow.
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