

Great Forester River Catchment Water Management Plan Review and Amendment Project: Water-related values

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Introduction

The Great Forester River Catchment extends from south of Scottsdale to Bass Strait, discharging into Anderson Bay. The Great Forester River Catchment Water Management Plan was adopted in 2003. This Plan is now up for review and amendment by the Department of Primary Industries, Parks, water and Environment (DPIPWE).

This report documents feedback on water-related values of the Great Forester River catchment determined through a facilitated workshop with the Consultative Group, organised as part of DPIPWE's water planning process. This group has been set up to represent the views and knowledge of catchment stakeholders in reviewing and amending the Great Forester River Catchment Water Management Plan. These views form an integral component of setting objectives for the management of water resources in the catchment. While questions relating to spiritual and cultural values were included in this consultation it is understood that further dedicated consultation with the Aboriginal community will be undertaken to identify these values more fully.

Workshop and survey

A workshop with the Consultative Group was held on 9 August 2018. This workshop ran for 3 hours, with facilitated discussion supplemented by individual participant responses to a written survey. This survey was also distributed to those members of the consultative group who were unable to attend the workshop. The workshop focused on 5 major discussion areas and was directed by the questions below:

Your relationship with the Great Forester River catchment

- What do you and/or your organisation value about the waterways and groundwater systems in the catchment? How are these important to you?
- How do you and/or your organisation use the waterways and groundwater systems now? How would you like to be able to use them in the future?

Spiritual, cultural and recreation values

- Do the waterways and groundwater systems hold any spiritual or cultural meaning for you and/or your organisation's members? What role(s) have they played in your lives?
- Do you and/or your organisation's members use the waterways or groundwater systems for recreation? How important is this to you?

Economic and productivity values

- What do the waterways and groundwater systems mean for the local economy? How do they support productivity?
- How important do you and/or your organisation think the waterways and groundwater systems are to the economic well-being of the community?

Environmental values

- What environmental values do you and/or your organisation see the waterways and groundwater systems having? How important are these to maintain?

The future

- What would you and/or your organisation like the waterways and groundwater systems to look like in the future? What outcomes should water management be trying to achieve in the next 10 years?

Workshop participants were asked to provide feedback both from their own personal perspective as well as from the perspective as a representative of their organisation (where relevant).

Overview of values and their linkages

While the discussion was split into individual areas of values (spiritual, cultural and recreational; economic; and environmental) it was clear that the Consultative Group members saw that these values are in many cases intrinsically linked. There were other areas where it was acknowledged that values could also be in conflict with one another.

Figure 1 illustrates the range of values that were raised by Consultative Group members during the workshop and the linkages they saw between these. For example recreational values were seen to be largely dependent on environmental values, while social and cultural values depended both on environmental values and economic values. Feedback on each of these values is summarised individually below.

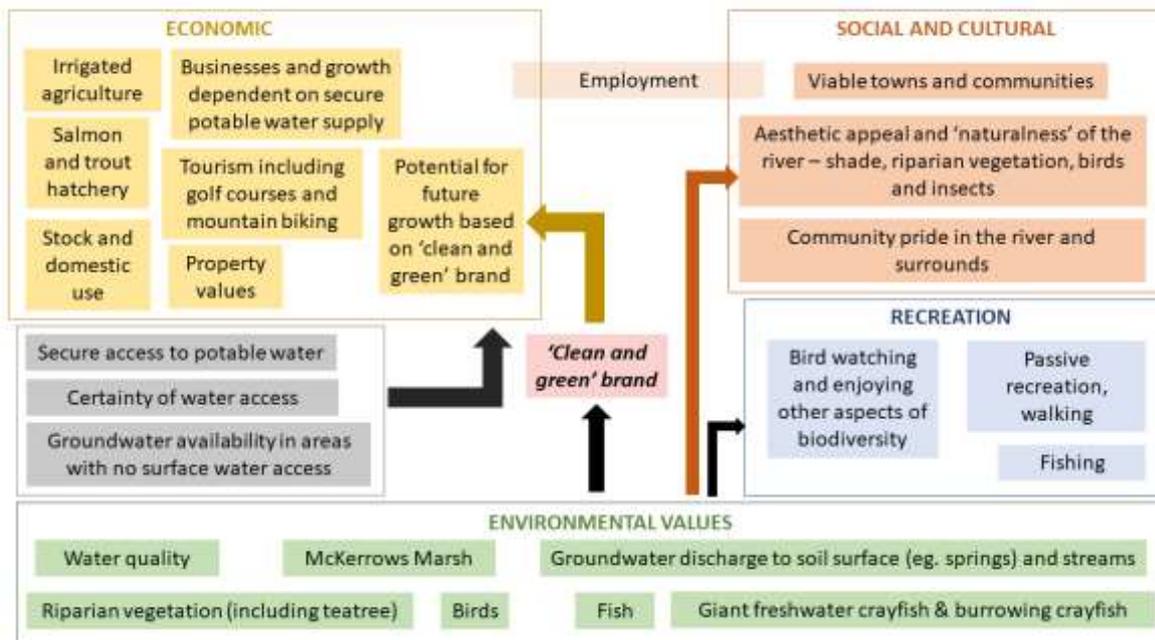


Figure 1. Water related values in the Great Forester catchment and their linkages

Features of the water-system that were seen to be essential to maintaining economic values were the certainty of water access, secure access to potable water and access to groundwater in areas with no available surface water. Both the quality and quantity of water as well as timing of its availability were seen to be important attributes to maintain economic values. Secure and certain water access was seen by participants to be vital to employment by allowing irrigated agriculture, the salmon hatchery and other businesses dependent on potable water (eg. tourism, shops) to occur. In turn

employment is necessary for viable towns and communities – underpinning all social and cultural values in the area.

Cultural and Spiritual values

Workshop participants did not identify particular spiritual values that they hold with regard to water in the Great Forester catchment. Participants did stress the importance of engaging with the Aboriginal community especially Elders (eg. Patsy Cameron) given the amount of cultural significant of the catchment.

Several values which could be considered cultural/social were raised by participants. These focused on two main areas of value:

- Community viability and maintaining populations and services in town centres and farming communities.
- Values they attach to the aesthetics and 'naturalness' of the river, which in turn contribute to the sense of community pride.

Access to water underpins community viability

Water is seen to be a major driver of local employment. Participants stated that irrigated farms employ many more people than dryland farms which in turn has a multiplier effect for local businesses and towns. This employment and population makes shops and schools viable. Access to potable water enables and supports growth in Scottsdale. Consultative Group members made it clear that employment is not only an economic benefit, it is a major social and cultural benefit – without water, community viability is threatened.

Aesthetics and community pride

Values around aesthetics included a strong sense of community pride and links to childhood memories as well as the general ambience experienced on the river. Workshop participants reflected on the calm and ambience in areas of the waterways where there is a mix of riparian vegetation, shade, birds and insects. Teatree in the lower catchment was also valued strongly for its aesthetics and the 'experience' it creates for those accessing the river. People discussed the importance of the waterway 'looking natural', including a lack of weeds, riparian vegetation and visibly clean water. It was noted by several participants that the river looks quite different now to when they were children with generally better stands of riparian vegetation now where before land would have been cleared all the way to the edge of the stream.

'Childhood memories of blackfishing with my family. Super silent apart from birdlife and pitch black at night. I can still recall seeing freshwater cray walking out of the river and wandering up the bank.'

Open access to the river was seen to potentially compromise these values with the status quo of requiring permission from landowners for access preferred. It was noted that most farmers are happy to allow fishers to access waterways.

Recreation values

Recreational values were attached to three main activities in and around waterways:

- Recreational fishing.
- Passive recreation activities including walking in and around the waterways.
- Bird watching and other activities focused on appreciation of the area's biodiversity.

All these activities are seen to rely to some extent on the water-related environmental values of the catchment.

In terms of recreational fishing it was stated that the upper catchment is not used as heavily as it was in the past, as users have aged and died. Participants indicated that recreational fishing focuses largely on trout and black fish in the catchment and that whitebait season is also highly valued as a recreational event. Headquarters Road Dam is also heavily used for recreational fishing.

Discussion of potential recreational values suggested:

- The school use the lower reaches for kayaking but it's too dangerous further up the river due to the teatree.
- Water sports haven't been a significant activity historically.
- Swimming is not a big thing because of the risks of river swimming (eg. snakes, teatree, snags). People tend to use the beach or the pool instead. Parents are less likely to allow their children to take the risks of river swimming now than in the past.
- Camping isn't really occurring to any extent and is not encouraged due to the risks involved for private landholders.
- Tourism focused on water-related values is a possibility in the future but not a current activity in the catchment.
- People probably *'take it for granted that the river is there and relatively pristine'*.

There was some discussion around the importance of maintaining the 'clean and green' brand with a healthy river to ensure opportunities for tourism based on recreation are available into the future even if these are not an area of current activity and value.

Economic values

Water is seen to be critical financially due to the reliance of irrigated agriculture on secure and reliable water access. Water is seen as creating opportunities for agriculture, with irrigated farming seen to be very different to dryland farming in terms of economic outcomes in the region. Irrigated farming is seen to drive employment with participants stating that significantly more jobs are generated on irrigated farms than dryland farms. Participants noted that with the decline of other industries such as forestry in the region, irrigated agriculture is more important than ever in providing employment and population to the area. This was seen as vital to sustain towns and communities with schools and shops there to service the population.

'Irrigation is the lifeblood for high value crops and dairy operations'

The large investment made by irrigators in water was noted. The added property value provided by secure and certain access to water for irrigation was also seen as a significant economic value. Agricultural activities such as spraying for weeds or pests was also noted as requiring good quality water.

The river itself is seen as providing a conduit for water to be moved between farms in the catchment. It was felt that this would become even more important if water trade was to increase in the catchment. Participants felt trade is likely to be an evolutionary thing, with levels of trade quite low currently but likely to increase in the future. Factors affecting trade discussed were uncertainty that surety 5/6 water that is bought would be delivered. Participants indicated that trade is expected to increase in the future as existing owners stop growing crops or if a new irrigation scheme comes in. There was a perception by some participants that using the river to transport traded water gives environmental benefits as well as economic benefits.

The importance of groundwater to replenish the river was also discussed. It was stated that it is important groundwater extraction doesn't drop groundwater levels sufficiently to impact on the water in the river system. Groundwater is not seen as a major source of water in the catchment though in areas without access to surface water it was acknowledged as being essential to farming. Participants discussed the results of past studies into the groundwater as a resource which they said showed groundwater is not a –reliable or cost effective/viable source of large volumes of water for irrigated agriculture in the catchment. This is because the particles in soils are not conducive to reliable access from bores and spears which tend to get blocked. Groundwater accessed through trenches avoids this problem. Current groundwater use is focused in lower areas of the catchment. It was noted that the golf course relies on accessing groundwater systems for irrigation (2m spears used).

Participants discussed the potential for forestry plantations to impact on surface and groundwater. The large area of plantations in the upper catchment was seen to pose some concerns for flow discharges to the river with the potential for large blocks of forest of the same or similar age class having the potential to reduce flows particularly in the first 5 to 6 years after planting when interception rates are high. While some discussion focused on the potential for pesticides and herbicides used in forestry operations to impact on water quality, in general, water quality from plantation areas was seen to be improving in recent years due to better management of forest practices, particularly riparian zones, under the Forest Practices Code.

Participants stressed the importance of continued use and surety and expressed concerns about the potential for reduced access in the future. They said they wanted water to be a shared resource and not locked up for a single use. When asked whether they considered the water resource to be shared now, participants indicated that with 50% of water allocated to environmental flows, insurance flows are not as available as they were previously. They noted *that 'you pay a premium for water on land that's not always delivered'*. Some participants indicated that they felt that many had invested heavily in Headquarters Road Dam to get back to where they were, with the perception that surety has been lost over time. Fair and equitable access to water was seen as being important with some participants indicating they don't feel it's currently always fair – for example at times upper catchment users are restricted and have to let water flow past them while lower catchment users are unrestricted and allowed to extract it. Issues with using the flow gauge on the Great Forester to restrict access on tributaries was also

seen as problematic, particularly for Coxs Creek which is not physically connected to the Great Forester River.

The importance of a secure supply of clean potable water was also noted as being important to support business activities and the potential for growth in Scottsdale. Providing certainty through ensuring supply is sufficient to avoid water restrictions was also seen to be important. Representatives of TasWater indicated that water quality is highly valued as it reduces the cost of processing potable water.

Current tourist facilities such as the golf courses are reliant on access to water. The need to maintain what they have in the river in order to preserve a 'clean and green' brand to provide future economic opportunity was also discussed with the potential for ecotourism in the future noted.

The economic values of the trout and salmon hatchery in the catchment were also discussed with this seen to be a major source of employment in the region. The potential for water releases from Headquarters Road Dam to impact the hatchery in the event of low dissolved oxygen in the release were also discussed. The importance of managing dam releases and levels to ensure sudden drops in dissolved oxygen don't occur was stressed

Key economic water-related values were:

- Irrigated agriculture and associated increases in property values and on-farm employment – reliant on surety of access, groundwater in areas where surface water is not available and good water quality.
- Aquaculture – trout and salmon hatchery reliant on clean and certain water supply.
- Stock and domestic water – reliant on surety of surface and groundwater access in areas where surface water is unavailable and good water quality.
- Current businesses and potential for growth in Scottsdale – reliant on secure access to high quality potable water.
- Regional employment – reliant on irrigation and opportunities for business development in towns.
- The 'clean and green' brand provides opportunities for future business growth when businesses buy into the brand – reliant on maintaining environmental and aesthetic values of the waterways.
- Existing tourist facilities such as the golf courses and the potential for future ecotourism – reliant on: maintaining environmental and aesthetic values currently associated with the waterway and 'clean and green' brand; secure access to water.

Environmental values

Environmental values were seen to underpin many other values including recreational, social and cultural values. Some economic values, such as those associated with a 'clean and green' brand were seen as being dependent on maintaining environmental values but the potential for a focus on optimising environmental values 'at all costs' was seen as a threat to the economic values around irrigation and employment. There was a strong emphasis on the need to balance these values and share water resources. There was a general perception that the river is in better health now than in the past with more

riparian vegetation and environmental flows than in the past. Some participants felt that the upper catchment is very different in terms of flows now with Headquarters Road Dam meaning more consistent flows and no floods. It was stated that it is now much more natural with more riparian vegetation and less erosion due to stock being fenced out and vegetation naturally regrowing or being replanted. Regrowth at the top of the catchment is said to be dominated by wattle, with teatree dominant in the lower reaches of the river.

Specific environmental values discussed were:

- Water quality
- Adequate flows
- McKerrows Marsh – the Blackwood swamp here is the only one in north-east Tasmania and is second in size only to Dismal swamp in the north-west.
- Stands of teatree in the lower catchment. There was a perception these have been dying back, possibly due to being too wet for long periods of time with water not running away.
- Burrowing crayfish in McKerrows Marsh and the catchment. Participants noted that the Scottsdale burrowing crayfish is a subspecies unique to the area. This is found more in wet vegetation in riparian areas than in the water.
- Giant freshwater crayfish which rely on riparian vegetation and flows. It was noted they are very sensitive to temperature increases and sedimentation so can be impacted by releases if these features are affected.
- Birds particularly in association with the teatree and other native riparian vegetation.
- Diverse native fish community especially in the lower river including whitebait and the nationally listed Australian grayling.
- Springs are important for stands of teatree and the swamps. Bird life in particular is seen as being dependent on these.

'We lose everything economically without river health. Keeping what's in the river – trees, fish insects, birds. Keep McKerrows Marsh as it is.'

There was a general perception that giant freshwater crayfish are increasing with one participant, who conducts frequent monitoring up and down the river, noting he'd seen more in the last 12 months than the previous 4 years. Participants said that the upper catchment was historically a prolific breeding ground with many juvenile cray in the cobbles but is no longer a good breeding ground due to sedimentation from historic forestry activities. Other areas were noted as having adults but a lack of juveniles.

While some participants felt that flows delivered for irrigation purposes would deliver benefits to the environment there was also a view that *'you've got to be careful about how much we put down the river'* as high summer flows are unnatural and there's potential to get floods if there are high summer rains on top of releases. It was also discussed that any environmental benefit of conveyed irrigation water is only between delivery points and not downstream of the pull out point for irrigation use.

Participants had mixed perceptions of environmental awareness in the region. Some said that there's more awareness now than 10 years ago. Others said many were aware but lacked financial capacity to make changes. It was said that they are now seeing

cumulative benefit of a long period of environmental actions. Participants said there is a lot of community pride in seeing the river in a better state but that it has come at a big cost with off-stream water and pumps. It was acknowledged that any change takes time and money to make.

Take home messages

When asked if there were any further comments participants would like to make there were several messages they felt should be heard. The first was the need to be realistic about trade-offs and the cost of achieving any environmental benefit. While it was felt that these could be minimised by allowing time for people to adapt, money and other resources and support, there was a strong message that environmental benefits shouldn't be sought 'at all costs' and the level of change people should be willing to accept needs to depend on how much lead time, dollars and support are available for the adjustment.

It was stated that changes from the status quo should only be considered if:

1. There is strong evidence that the change will lead to benefits.
2. These benefits outweigh the costs of change and warrant the socio-economic impact.

'Safeguard the river and groundwater systems but as a farmer access to water is vital for a successful future for myself, my son for more than 10 years (I hope). Forever. I feel very fortunate to have the Great Forester flow through our property.'

Participants stressed the importance of strong evidence based on quality science to be communicated to the group to support any proposed need for change.

The need for high levels of accountability including appropriate data collection and the use of data sets in a more integrated manner was also discussed. It was also felt that good coordination between organisations who manage quality and quantity of water (eg. NRM North and DPIPWE) is needed to ensure the best environmental outcomes can be achieved.