

Traditional Owner led FLOWS Study for Campbells Creek in Victoria

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Key points

- DJAARA (Dja Dja Wurrung Clans Aboriginal Corporation) are project managing an adapted FLOWS Study that ensures Djaara's (Dja Dja Wurrung People's) values and objectives guide the project and ultimately the flow recommendations for Campbells Creek in Central Victoria.
- Campbells Creek would be a seasonally ephemeral creek without the daily discharge from the Castlemaine Water Reclamation Plant's (WRP's), which averages approximately 3.5 ML/day.
- The WRP discharge is an important hydrological feature of the creek, and among other ecological values, it helps sustain habitat for platypus.
- This FLOWS Study's primary purpose is to recommend a flow rate for Campbells Creek to best support ecological and cultural objectives set by Djaara.
- The FLOWS Study is one element in researching the feasibility of meeting the Victorian Recycled Water for the Environment policy for discharges from the Castlemaine WRP.

Abstract

This Djaara led FLOWS Study is the first of its kind, aiming to ensure Djaara values, objectives and knowledge inform flow recommendations for treated water discharges into Campbells Creek in Central Victoria. The project uses a modified version of the FLOWS method, a well-established approach for determining flow regimes that support ecological values in waterways. This adapted method will aim to weave cultural knowledge with western science for an outcome that supports both the environment and Djaara culture. DJAARA has employed four Djaara people as cultural advisors through the 'Wartaka' group model. Their role is to ensure the project's direction, decision making and recommendations are grounded in culture. Careful consideration has gone to the project framework, including governance arrangements and agreed principles for working together. These agreed ways of working ensure a culturally safe and appropriate process throughout the study. Given this project is still ongoing, this paper focuses on the process being embarked on to reach the outcomes and final decisions, rather than the outcomes themselves.

Keywords

Traditional Owner led, Cultural Knowledge and Governance, FLOWS Study, Recycled Water for the Environment, Central Victoria

Introduction

The Djaara led FLOWS Study is a seminal project and the first of its kind, with a First Nations organisation leading an adapted, culturally appropriate FLOWS study to determine a recommended flow regime for recycled water entering Campbells Creek. At its core, the project is working towards meeting the new Recycled Water for the Environment (RWE) policy developed by Victoria's Department of Energy, Environment and Climate Action (DEECA).

This project applies the established FLOWS methodology adapted to meet the needs of DJAARA. Its adaptation aims to ensure Djaara authority over the project, and a culturally appropriate process,

whilst not losing the essence of the FLOWS methodology. The adapted methodology aims to weave cultural knowledge within western science so that cultural and environmental objectives set by Djaara drive the final recommendations. In achieving this, project participants will incorporate a two-way knowledge approach and navigate the complexities of “walking in two worlds” as stated by Djaara Elder Aunty Peta Hudson. This will realise beneficial outcomes for not only Djaara but for the whole community by improving the health of Djandak.

FLOWS studies are typically managed by the Catchment Management Authority (CMA) as the legislated waterway manager, however, in this case, DJAARA are assuming the role of waterway manager and lead the process. This aligns with DJAARA’s future expectation of being the formal waterway manager as outlined in the Gatjin (Water) Strategy and in the meantime helps develop DJAARA’s capacity and capability.

Aboriginal Waterways Assessments (AWAs) are DJAARA’s tool to make management recommendations as well as score waterway health and cultural values at various locations on waterways. However, recommending a culturally appropriate flow rate requires more detailed analysis. In this case it was opted to adapt the FLOWS model, however, other avenues exist including cultural flows methodologies which are being explored in other projects. By testing and learning from different approaches, DJAARA are developing a breadth of capability to recommend flows for culturally beneficial outcomes across waterways on Djandak.

Context

History

Campbells Creek in Victoria is a much-loved community asset in Central Victoria. The creek begins near the township of Castlemaine and meanders southward before meeting the Loddon River at Guildford. The Creek has a complex colonial history. Following European settlement in the early 1840s, the landscape was subject to widespread destruction and manipulation during the 1850s gold rush. Gold mining continued along the creek well into the 20th Century, with digging, sluicing and dredging dramatically altering its channel, floodplain and sediments.



Figure 1 Daintree, R. (1995). [Chinese goldmining camp near Guildford] [picture] / Richard Daintree



Figure 2 Carter, G. L. (1871). A group of miners with sluice, Nuggetty Creek, Campbells Creek

In more recent decades, the Friends of Campbells Creek Landcare Group have been instrumental in creating a sense of ownership and custodianship to the creek for local landholders, with monumental on ground efforts bringing the creek and catchment back from a weed infested, denuded, disregarded creek to a biodiverse and now treasured community asset.



Figure 3 First community led Campbells Creek restoration project in 1986



Figure 4 Friends of Campbells Creek working bee in more recent times

Project background

Campbells Creek receives permanent, all year-round flows from the Castlemaine WRP. Although there are water quality considerations associated with the discharge, these flows support a range of ecosystem functions. What would typically be a seasonal ephemeral creek has received treated water flows from the WRP for many decades. With major infrastructure upgrades planned at the Castlemaine WRP, Coliban Water engaged DJAARA to provide advice on the values of the creek that would benefit from recycled water outflows. Aboriginal Waterways Assessments (AWA's) were used as DJAARA's preferred tool to identify cultural and environmental values and to ultimately make management recommendations. One recommendation made by Djaara people was to discharge water from the WRP at a rate most suitable for the environment and culture. The current discharge to the creek is approximately 3.5 ML/day, however, questions were raised as to whether the flow rate could be managed to maximise cultural and environmental outcomes. This led to the ideation of a FLOWS Study, led by DJAARA, to ensure cultural values and objectives guided the development of flow recommendations for the creek.



Figure 5 Djaara conducting Aboriginal Waterways Assessments on Campbells Creek



Figure 6 Djaara conducting Aboriginal Waterways Assessments on Campbells Creek

As the noticeably destructive early colonial impacts are countered by strong community and Djaara ambition to heal Djandak, Djaara are emerging as leaders to provide cultural guidance and direction for those healing Country in this cherished waterway. Despite the violent and abhorrent past for Djaara people, they maintain their cultural connection to place through cultural practice and now offer their knowledge to help define a new way forward. The FLOWS Study, together with other local restoration projects DJAARA are involved in, reflect an interweaving web of effort and energy all in the name of healing Country and community

Cultural Governance

Castlemaine Wartaka

An approach adopted by DJAARA to ensure cultural knowledge and governance in projects is the use of what is called a Wartaka. In Djali (Djaara language) meaning “To come together with purpose”, the concept of a Wartaka is used to bring together a select group of Djaara people to act as cultural advisors for a project. A Wartaka can hold multiple functions including, but not limited to: sharing cultural knowledge relevant to a project; setting project direction and ensuring culturally appropriate processes; ensuring a Djaara lens is applied to all decision making. A Wartaka typically consists of Djaara members of all ages, genders, and family lines. Each project aims to select a Wartaka with the right balance of eldership and youth as well as consideration of family lines, gender, connection to Djandak and local and subject matter expertise.

The Castlemaine Wartaka was formed at project inception via pre-existing internal processes including EOI call outs to the entire DJAARA membership. Four Djaara people were selected with the intention that they be engaged in the various waterway relevant projects linked to the Castlemaine region.

Governance framework

A DJAARA led governance framework was established early on, acknowledging the importance of project sponsors (DEECA and Coliban Water) and their obligations as funders of the project, whilst ensuring it is DJAARA led.

At the heart of the governance framework are the principles that the Castlemaine Wartaka, as cultural advisors, make key decisions relating to the project and a culturally safe space is created and maintained at all times.

To this end, the two formal governance bodies established for the project – the Project Steering Committee (comprising project sponsors) and the Project Advisory Group (comprising other stakeholder and community representatives) – met with the Castlemaine Wartaka on Country at the commencement of the project, and have been subsequently engaged only at the request of and/or with the approval of the Castlemaine Wartaka.

Importantly, the Castlemaine Wartaka have been supported in their work by the DJAARA Gatjin Team and a team of Consultants, who have worked collaboratively to respond to the needs and interests of the Castlemaine Wartaka, thereby respecting their time and contributions and allowing them to fully participate in the project as cultural advisors without the burden of managing project mechanics.

The way in which these groups interrelate has been fluid and responsive to the natural flow of project progress.

DJAARA as (agency) weavers

Djaara people see the world holistically and consistently aim to break down siloes created through western science and bureaucracy, and agencies’ ways of working and legislative arrangements. DJAARA see themselves as holding the role of weaving agencies and people together. This weaving aims to break down artificial, visible, and invisible siloes which limit creativity, connection, and collaboration. DJAARA are well placed to act as the intermediary between agencies, helping to bridge people, place and culture. With multiple waterway restoration projects ongoing in Castlemaine, DJAARA are supporting collaboration between groups to leverage an integrated approach which benefits all. Figure 8 shows a workshop organised by DJAARA whereby those affiliated with the local creeks, from agency representatives, Djaara people, Landcare to community members, gathered to spend time on Country. The day involved discussion of the various waterway projects in the region, ending with a weaving workshop led by Djaara master weavers. The day was an opportunity for everyone to connect in an informal setting over a cultural activity, fostering an environment of sharing and joy.



Figure 7 Smoking ceremony to mark the project inception with Project Steering Committee, Project Advisory Group reps, consultants, Wartaka members



Figure 8 Weaving on Waterways Workshop led by DJAARA in June 2026 to connect stakeholders involved in waterway restoration projects in Castlemaine and Djaara people

Engagement approach

The engagement approach is a key deviation from the typical FLOWS methodology, with the presence of the Castlemaine Wartaka a major change to typical FLOWS methods. The Castlemaine Wartaka fulfils the role typically delivered by agencies and technical experts, forcing a rethink of the project engagement approach. The engagement with Wartaka is deeply ingrained in place with on-Country activities a cornerstone to enabling conversation and connection. This began with a smoking ceremony to launch the project with all stakeholders, which set the tone of beginning the journey together.

Water Technology and Clear Advice & Strategy were selected to support DJAARA through the project. Their experience working with First Peoples and their emphasis on cultural safety and a culturally led process was key to selection. Another important consideration was their willingness to deviate from the original project proposal and adapt via a learning-by-doing approach. This allowed evolving and respectful conversations between the Wartaka, western scientists, agencies and the Friends of Campbells Creek to grow a shared understanding of how to approach a Djaara led FLOWS study. We are seeing the project evolve as a dance between going with the plan and going with the flow.

An integral part of the project's success is relationships. Necessary time was afforded to allow everyone to get to know each other and understand each other's backgrounds and perspectives. This included enabling and unpacking a Djaara led approach, and which in turn was formally acknowledged and agreed to by all parties. Given the various agencies and individuals involved in the project, the importance of relationships can't be understated.

Methodology and process

The methodology and process has been developed by Water Technology and can be seen at a high level in Figure 9. This has proven a useful guide as we progress through the stages, with the ordering of tasks fluidly changing and dictated by how the project is progressing rather than the pre-determined method.



Figure 9 High-level Project Plan for DJAARA led FLOWS Study

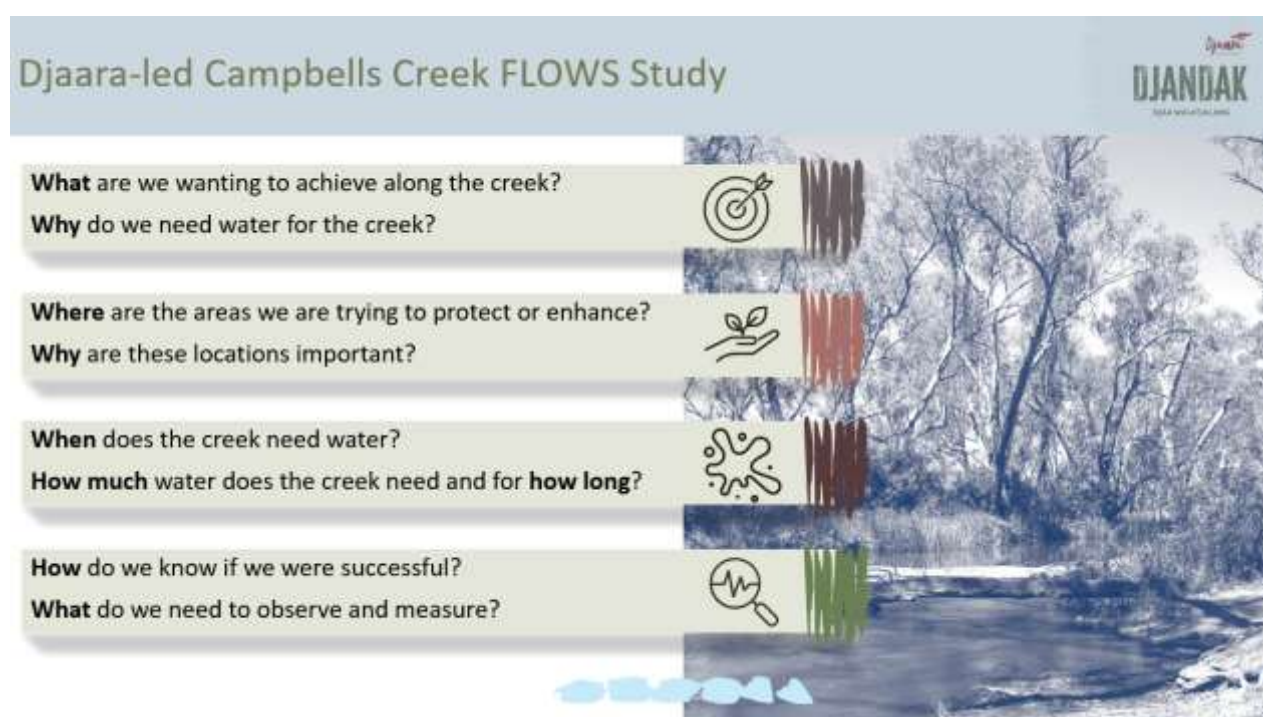


Figure 10 High-level adapted FLOWS method

A key part of ensuring a culturally appropriate process is enabling considerable on Country time, which can often be a challenge for project budgets. This project has utilised a hybrid approach of in person on Country and online time with the Wartaka. Additionally, easy to follow material and FLOW method processes have been developed for the Wartaka such as in Figure 10 to make the concepts and project more accessible. Wartaka members come with a range of backgrounds and experiences and this material aims to make the FLOWS method accessible to someone who does not have western science expertise or western waterway management experience.

Early learnings

Due to colonisation and current ways of working, the identification of cultural values and objectives can be challenging. What has emerged as important is for those working with the Wartaka to read between the lines of what is being said and deeply listen to not only the words but body language and what is being said around the words. For example, reflections from on Country visits were framed around what was seen, heard and felt whilst out on Country, alongside what was said by the Wartaka. Similarly, consideration of values extended beyond physical attributes of the creek that were observed to more intangible experiences, connections and opportunities that the creek might provide.

Conclusions

In a region profoundly altered by colonisation, this project continues and strengthens the ongoing efforts of the local community to care for and restore the creek. In recent years, DJAARA have become increasingly involved in healing the Campbells Creek catchment and are on an important journey to lead restoration and reconnection efforts. Through their leadership and guidance, DJAARA aim to support the broader community to reconnect with and live in harmony with Djandak.

A strong foundation has been established through a culturally appropriate governance framework and a culturally led approach to developing flow recommendations for Campbells Creek. The initial phases of the project demonstrate a heart-centred, sensory approach that draws on Djaara's unique ability to read and intuit Country through deep cultural knowledge. Cultural values and objectives will emerge from this connection to Country, while thoughtfully integrating insights from other knowledge holders and experts. The project ensures all partners are meaningfully engaged and valued in their roles, and through DJAARA's leadership, Campbells Creek is supported to continue its journey towards improved ecological health, contributing to the wellbeing of all beings, human and more-than-human

The technical process of recommending culturally appropriate flow rates for Campbells Creek is still in its early phases and we look forward to sharing more comprehensive lessons during our conference presentation in September.

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