



Practical advice on building water literacy

Water literacy—or ‘water-related knowledge’—is crucial for implementing water sensitive cities.

Low levels of water literacy can affect community support for novel water sensitive solutions, and limit community engagement in shared water services (e.g. managing stormwater on lot) or participation in governance (e.g. joining forums to influence long term water strategies).

Our aim is to see water sensitive practices applied as business-as-usual activity in every city, every day.

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Water Sensitive Cities
Australia



This industry guidance presents evidence-based recommendations to help those in the water sector uplift water literacy levels.

These recommendations can be applied across the water cycle and through varying climate cycles—be it flood, drought, or anything in between. The guidance targets anyone in the water sector whose role includes community engagement, including communication managers working within councils, water utilities and state government agencies. Many of these methods will also apply to other sectors.

The guidance evolved from a project that reviewed existing research to develop practical recommendations for conducting effective community management. We tested these recommendations in pilot projects in Melbourne and Perth, and then used insights from those pilots to refine the recommendations.

See [Building community water literacy – Technical report](#) for more information about the pilots.

The list of recommendations is not exhaustive. Nor does it consider how to adapt individual tactics for different key messages or provide recommendations on channels.



How to use this guidance

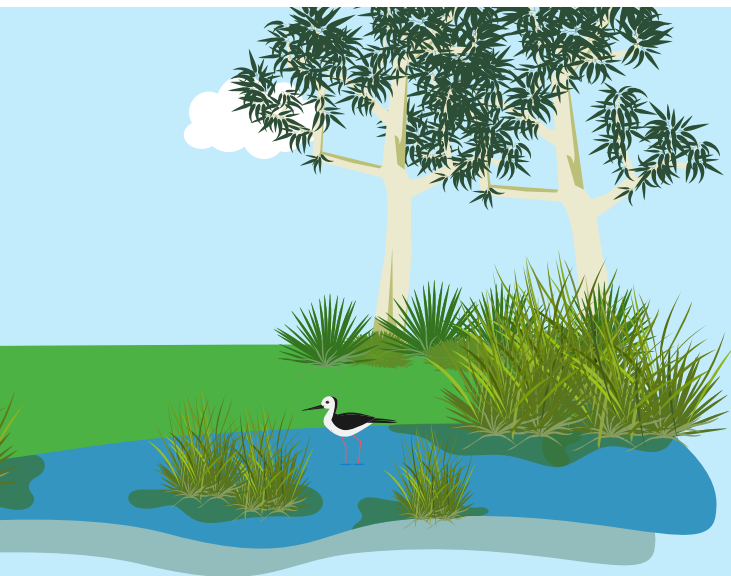
The guidance is presented in 4 sections to assist in planning and delivering activities to build water literacy:

1. Planning your campaign

2. Designing your campaign

3. Delivering your campaign

4. Evaluating your campaign



1. Planning your campaign



Prior planning is key to successful delivery. The recommendations in this section highlight the need to think about the audience, set clear water literacy objectives and consider how these factors affect the campaign design activities in the next section.

Know your audience

Existing research such as SECNewgate Research (2023) shows that water literacy is significantly associated with personal characteristics. If the objective is to increase water literacy generally, recommended target groups include:

- **those with lower levels of education**
- **those with lower incomes**
- **younger people**
- **those who speak a language other than English at home**
- **those who have spent less time in Australia**
- **women**
- **those who don't have a garden.¹**

These target groups differ in water knowledge, interest and environmental values, and exhibit unique demographics.² The guidance was developed with these 'target groups' in mind, noting recommendations apply to everyone.

- **Identify the target audience and the factors** influencing or hindering their water literacy and engagement (e.g. income, gender, waterway use, length of residence, time, language).
 - Avoid relying on data collected in other settings or at different scales where possible. Prioritise obtaining baseline data on current literacy levels and knowledge gaps in the target communities of the campaign, using an investigative approach that combines surveys for broad prevalence with focus groups for nuanced insights.³⁻⁶
- **Consider what interests the target audience or what will engage them.** Focus on understanding disengaged groups, who often exhibit characteristics that reduce exposure to water-related information or hinder comprehension, interpretation and retention. Use these insights to design engagement strategies that better capture their interest.



Have clear water literacy goals

- **Identify which water knowledge gaps to address** by reviewing benchmarking research and aligning these gaps with current water sector priorities (e.g. linking gaps in understanding water sources with policies for alternative sources, or gaps in stormwater understanding with blue-green infrastructure initiatives).
- **Address the water 'issues' that are least understood** by debunking prevalent myths. Emphasise clarifying the roles of utilities and increasing awareness of where urban water supplies originate and where they go, thereby improving overall water literacy.
- **Define clear campaign outcomes (as opposed to content outcomes)** by distinguishing between cognitive and emotional components.
 - *Cognitive* engagement refers to knowledge about key water-related issues, and the capacity to apply this knowledge. Start with the 'basics' and build from there so community members have foundational knowledge as context for more specific behaviours and decision making.
 - Incorporate *emotional* engagement elements into the campaign plan, to build positive attitudes about water and water management. People adopt habits when the action/outcome makes them feel good. Build messages around the personal and cultural values of water.



Plan to build water literacy over the long term

- **Invest adequate resources and time to see long-term water literacy results** by integrating individual engagement activities into ongoing campaigns. Emphasise the importance of repeated exposure to campaign messages to reinforce learning and sustain behavioural change, especially among disengaged community segments.

2. Designing your campaign

The design stage is when you determine the specific objectives for a campaign or a strategy, and what activities will actually be included. This stage is about operationalising the plans developed in the previous stage, and considering how the campaign will be received by the target audience.

Respond to constraints

- **Design activities to address existing interest positions and social contexts** by tailoring both message content and channel selection. Ensure messaging accommodates diverse starting points and plan for long-term, repeated engagement that allows for iterative refinement of ideas—thereby deepening audience understanding and supporting future actions and policy development.

Be engaging!

- **Clearly articulate the 'why' behind each call to action** by linking it to issues and barriers relevant to the audience. Explain the necessity and benefits of engagement in relatable terms that address common concerns such as time and financial constraints, thus motivating action and prioritisation. An audience may ask: 'why should I care', or 'why should this be my priority (given barriers such as lack of time or money)'. It is difficult for people to become engaged if they don't know why it is important (e.g. I have no garden) or if they face more immediate barriers (e.g. affordability is my biggest issue) to adopt the call to action.⁶



Messages



Focus key messages on water's role in liveability and address knowledge gaps across the urban water cycle: water supply, wastewater, waterways, drainage and catchments.



Tailor your messages to resonate with specific audience segments by ensuring each message has a clear purpose. Messages intended for 'everyone' won't actually appeal to 'everyone'. Clearly define the intended action or outcome so recipients understand how to respond, rather than relying on generic messaging.



Align water literacy messages with existing sustainability, health or related campaigns to enhance credibility and reach. Allocate sufficient planning time for coordination, resource allocation and necessary approvals when designing multi-organisational or cross-campaign initiatives. For example, health campaigns encouraging people to exercise more will align with messages on the amenity value of waterway corridors; a climate change narrative aligns well with resource recovery initiatives in the water sector.



Craft messages that connect various water management concepts, helping the audience understand interrelationships (e.g. linking stormwater management with catchment health). Integrate insights from tailored engagement and framing to create a coherent narrative that bridges individual topics effectively.



Language matters

- **Use simple, community-friendly language and avoid technical jargon.** Pre-test proposed messages with members of the target audience to identify and address any challenging concepts or disconnects, ensuring clarity and effectiveness—especially when introducing new topics or issues.
 - o A key part of 'getting the message right' is ensuring the language used allows the reader, viewer or listener to understand the content. Further, using community-friendly language results in greater interaction with the message.³ Avoid water industry jargon like potable water, alternative water, fit for purpose.^{1,3,7} This technique reflects the 'Make it Easy' principle from the Easy, Attractive, Social and Timely (EAST) framework, so that messages are easier to understand (reducing cognitive effort) and the behaviour is easier to perform (reducing practical effort).⁸

Use visuals

- **Use local images as much as possible** as they are more engaging. The familiarity of images is closely tied to both the degree to which the image elicited positive emotions and the personal relevance of the image.³
- **Use images that include local people,** as this is perceived to be more engaging.³
- **Explain the relevance of the visuals** by linking them directly to key messages and calls to action, ensuring the audience understands how each image supports the overall campaign purpose. If there is a need to use images of creeks, rivers or oceans, then explain the relevance of the image to the key messages and call to action.³
- **Use images that resonate positively with the audience.** Do not use images that elicit disgust (e.g. litter in waterways, dead fish). For example, photos depicting flood clean-up efforts, and images that have flowers or vibrant green foliage will likely elicit more positive emotions and greater engagement than images of pollution or damage.³

Get the framing right

- **Frame messages and campaigns in ways that guide people's thinking about the issue.** Ensure the framing is directly linked to the campaign's purpose and pre-test messages to confirm the intended frame is understood correctly without causing confusion over terminology or expectations. It is important to consider the following factors when framing messages:
 - Framing can be used to foster a sense of identity as a water literate/water sensitive citizen⁹ by reinforcing positive social norms. Stewardship initiatives are especially popular with communities. They can be very effective at attracting participants and generating social learning.⁴
 - Allow for the possibility that key water sensitive messages are heavily influenced by emotions related to symbolism and status. For example, water sensitive behaviours may take on high status, such as being able to maintain gardens and green space.⁶
 - A 'sustainability' framing increases support for water sensitive cities by those who are disengaged or indifferent towards environmental issues. Support for water sensitive cities is highest when participants read information that discusses the benefits framed as a sustainability initiative. Information framed in terms of economic arguments do not resonate.³
 - Messages that appeal to closely held values have more traction although such framing has less effect for individuals with strongly held opposing values.⁴
- **Engage delivery partners early** to build baseline stakeholder trust and strengthen organisational engagement capacity, ensuring sufficient time is allocated for thorough planning and delivery.
- **Make it personal by clearly aligning imagery, messages and campaign purpose with the target audience's values.** Showcase personal benefits and the role of water/waterways in everyday life.³
- **Align messages with broader community values and community perspectives.** Use this alignment to identify and proactively address potential obstacles in both the messaging and campaign delivery approaches.
- **Consider a new angle on an established topic by leveraging baseline audience knowledge and conducting early message testing.** Consider applying a new rationale or context for the particular message to ensure the targeted knowledge is communicated effectively, maximising impact while minimising unintended consequences.⁴ Individuals are often more receptive to new ideas than being asked to remember, or change, an old idea.
- **Monitor for unintended consequences** throughout campaign design and implementation, and be prepared to adjust strategies as needed to prevent counterreaction responses.





3. Delivering your campaign

Delivery relates to the more specific operational decisions around channels, messages and spokespeople as well as budget, timing and political factors. In this stage, things become more tactical, and implementation is often agile, accounting for community sentiment as it responds to the messages and delivery.

Respect sensitivities

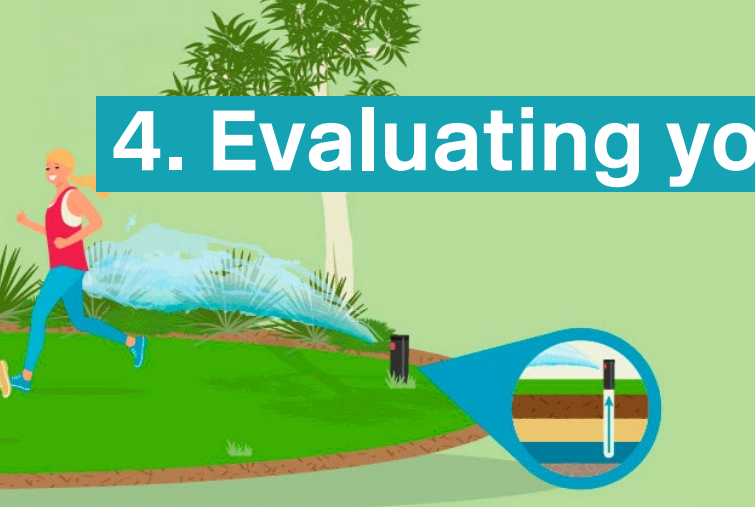
- **Respect cultural issues** by integrating local knowledge and aligning water literacy efforts with established community practices and activities.⁴



Channels

- **Move away from a 'talking heads' approach** by incorporating dynamic visual imagery that clearly demonstrates the connection between practical examples and the campaign's purpose.^{4,10}
- **Use recognised community leaders as advocates**, to show support for your projects. The credibility of the message is influenced by the spokesperson, and so ensuring credibility of presenters is important for building trust and information retention. When delivering challenging or controversial content, consider using experienced science communicators and/or trusted community figures, such as sports people.⁴
- In addition to online channels, **incorporate in-person delivery** at key locations whenever possible.
- **Collaborate with like-minded organisations** for joint message delivery and cross-promotion to amplify reach.
- **Amplify the channels where people already expect to get information about water.** The most commonly cited sources of water-related information were water utility bills, television and newspapers.¹
- **Ensure campaign delivery is accessible by removing barriers** related to time, language or technology, thereby facilitating broader participation among the target audience.⁴

4. Evaluating your campaign



It is important to measure and evaluate the effectiveness of water literacy campaigns, using a structured evaluation approach. Evaluation can assess whether campaign activities were successfully delivered and what the outputs were. It can also assess outcomes of the campaign. This stage can consider whether the intended goals and objectives have been met (e.g. to build water literacy), not just whether individuals adopt the behaviour (e.g. conserving water).

Evaluating effectiveness is important because not all campaigns are effective and, in some cases, campaigns can inadvertently trigger the opposite response.

What to evaluate

- **Track process indicators** such as the number of community members reached, the representativeness of those reached and their perceptions of the initiative. Include both quantitative measures and qualitative assessments of engagement quality to enable early detection of challenges and support adaptive strategy adjustments. Processes include 'how many' and 'how' aspects of intervention implementation, like public sign installation or community-directed engagement.⁴

- **Evaluate overall effectiveness** by measuring intended outcomes and monitoring for any inadvertent counterproductive responses that might undermine the campaign's goals.
- **Assess the effectiveness of various communication channels** by evaluating their reach and exposure. Leverage commonly used sources such as water bills, television and newspapers, while identifying and addressing any gaps in exposure. Over half of respondents to a 2015 survey reported no exposure to water-related information in the past 6 months.¹
- **Evaluate immediate outcomes** by tracking engagement, understanding of the issue and audience perceptions—while also considering long-term literacy goals. Build capacity to capture key audience data for ongoing tracking and baseline comparisons for future topics.
- **Measure intermediate outcomes** by tracking changes in awareness and behaviour, ensuring these metrics align with baseline data and overall campaign objectives.⁴
- **Measure impact** such as change in water knowledge over time; change in sentiment towards technologies; long-term goals such as improved water quality, reduced water use, environmental stewardship or policies fostering community wellbeing.⁴ It may include perceptions about the behaviour, awareness about the issue or environmental indicators relevant to the behaviour.

How to evaluate

- **Establish a comprehensive monitoring and evaluation framework at the outset** that combines both qualitative and quantitative methods. Ensure early and broad baseline data collection to identify knowledge gaps, interests and effective channels, and incorporate formative message testing (e.g. focus groups) to refine campaign strategies.
- **Conduct a baseline survey** prior to project launch to capture initial conditions and provide a benchmark for measuring campaign impact over time.



- **Utilise a diverse mix of success indicators**—including process metrics, immediate outcomes, intermediate outcomes and long-term impacts—to comprehensively evaluate campaign effectiveness.
- **Combine multiple evaluation methods** to capture the full range of community engagement outcomes, integrating qualitative insights and quantitative data for a robust and comprehensive assessment.⁶

References

1. Dean, A., Fielding, K., Newton, F., & Ross, H. (2015). *Community knowledge about water: Who has better water-related knowledge and is this important?* Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities.
2. SECNewgate Research (2023). *Measuring Water Literacy* [presentation slides]. Project for the Water Services Association of Australia.
3. Schultz, T., Dean, A., Newton, F., Ross, H., & Fielding, K. (2017). *Getting the message right: The use of frames, community-friendly terminology and visuals.* Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities.
4. Dean, A., Fielding, K., Newton, F., & Ross, H. (2016). *Community engagement in the water sector: An outcome-focused review of different engagement approaches.* Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities.

5. Dean, A., Lindsay, J., Fielding, K., & Smith, L. (2016). *Community profiles of engagement with water: Identifying 'footholds' for building engaged communities.* Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities.

6. Dean, A., & Smith, L. (2016). *Guide to promoting water sensitive behaviours.* Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities.

7. Fielding, K., Dean, A., & Newton, F. (2016). *Community understanding of water terminology: A survey of Australian community members' understanding of water-related terminology.* Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities.

8. Behavioural Insights Team (2024). *EAST: Four simple ways to apply behavioural insights* (Revised and updated edition). London, UK: Behavioural Insights Team.

9. That is, a person who cares about, and acts in a way that supports, sustainability etc.

10. Webb, T., Burgin, S., & Maheshwari, B. (2009). 'Action Research for Sustainable Water Futures in Western Sydney: Reaching beyond traditional stakeholder engagement to understand community stakeholder language and its implications for action'. *Systemic Practice and Action Research*, 22(1): 1-14.

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