

# Enhancing Community Engagement and Participation in Stormwater Management

Little Stringybark & Dobsons Creek Projects  
Fact Sheet Series: 5

The Little Stringybark Creek (LSC) and Dobsons Creek projects were long-term catchment-scale experiments designed to test if Stormwater Control Measures (SCMs)—primarily rainwater tanks, raingardens and infiltration systems—applied across an urban catchment can help restore stream condition. Commencing in 2008, the projects were led by The University of Melbourne and Melbourne Water, in collaboration with local government, industry, and property owners. We monitored changes to stream water quality, hydrology, and ecology (Fact Sheet 10), and also assessed techniques for local government collaboration (Fact Sheets 3 & 4), community engagement (Fact Sheet 5), as well as SCM design, performance and maintenance (Fact Sheets 6 & 7).

## About the fact sheets

These fact sheets summarise our scientific and practical findings and insights on catchment-scale stormwater management over the long-term LSC and Dobsons Creek projects. We hope that they might inform and guide the planning and delivery of future waterways management projects for improved stream health.

## How community were engaged

With approximately 50% of impervious surfaces located on private land, community engagement and participation were essential to the LSC and Dobsons Creek projects. Residents were engaged through a combination of education and incentives programs. Education events like raingarden open days, community forums and newsletters were aimed at raising awareness of both the projects (including how households could participate) and the creeks (including the threats to their health).

Financial incentives were devolved over multiple rounds, including market-based instruments that encouraged co-investment and offers of free tanks. By the end of the projects, SCMs had been installed at over 230 properties for LSC and 240 for Dobsons Creek.

## Findings and insights

1. It was valuable to have a consistent and personable point of contact
2. Building community interest, trust, and participation takes time
3. An extended implementation timeframe allows for the adaptation of engagement procedures
4. The processes for community participation must be simple and convenient
5. Awareness of the ecosystem assets and the threats to their health can build community support
6. Financial incentives can encourage installation of private SCMs
7. 100% community participation is unlikely
8. Use a range of appropriate, well-timed and integrated communication initiatives
9. There are added benefits to involving the community in stormwater management
10. Consider the long-term engagement of community members

*See over for more details*

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**1. It was valuable to have a consistent and personable point of contact.** Both projects were initially met with healthy skepticism by the community, a result of the 'unusual' offers of free or heavily subsidized tanks. Having a single staff member (or point of contact) in place for the life of the project was a positive factor for household participation. It built familiarity and allowed more personal connections to develop, which helped to establish trust. Specifically, a positive 'first contact' was considered important in creating a trusting relationship. Community perceptions of the projects were (in part) found to be based on their personal experiences (Brown et al 2014).

**2. Building community interest, trust, and participation takes time.** Delivering the projects over an extended timeframe gave the community time to: i) comprehend the environmental problems being addressed; ii) appreciate their role in the solution; and iii) develop trust and engage with the project. A long delivery enables repeated and varying/tailored promotions of a project and allows for any initial interventions (in this case SCMs on public land) to act as a promotion for the project. Over time, social networks can help foster trust when community participants share their positive experiences. 'Word of mouth' was found to encourage those community members initially hesitant to participate. Programs that seek community participation (either through incentives or regulation) should accept that high levels of participation will take time, building this into their design and funding.

**3. An extended implementation timeframe allows for the adaption of engagement procedures.** The sustained effort and multiple incentive rounds of both projects allowed for a continual improvement process to be adopted. Lessons and community feedback obtained between stages of engagement were used to better target the community's diverse motivations and to overcome barriers to participation. Having the time to evaluate, review and adapt was pivotal to obtaining the higher rates of community participation achieved in the mid-latter stages of the project.



*Raingarden open day, Mount Evelyn.*

**4. The processes for community participation must be simple and convenient.** The use of an elaborate market-based instrument in Round 1 of the LSC project was a key reason that round failed to achieve the level of participation anticipated. The process was difficult to understand and took too much time. Subsequent rounds of incentives were increasingly simplified, with greater success. The complexity of the incentives model was also found to influence participation in the Dobsons Creek project. Any mechanism used to engage the community, especially market-based instruments, should be bureaucratically (and mathematically) simple to understand and participate in and should balance the needs of the project with the capacity of the community. The converse risks tarnishing the perceptions of the project.

**5. Awareness of the ecosystem assets and the threats to their health can build community support.** Both LSC and Dobsons Creek are small waterways located primarily on private land, meaning few community members were initially aware of their existence. Moreover, for LSC, those that were aware of the creek saw little value in it and believed that better management of stormwater was not necessary, with some believing that stormwater had a positive impact on the creek. Such misunderstanding can severely diminish community interest and willingness to participate in environmental programs. Project coordinators should therefore strive to ensure a minimal level of knowledge by the community. For both the LSC and Dobsons Creek projects, educating the community on the value of the creek and the threat of stormwater runoff was critical to gaining their participation in the project.

**6. Financial incentives can encourage installation of private SCMs.** Installing a rainwater tank (or other SCM) on a property can be a significant expense, especially when it is primarily for an environmental rather than personal benefit. Cost was found to be the single largest barrier to installing rainwater tanks for the LSC project. Both projects found that even when they adopted incentive programs that required residents to make only a small financial contribution, cost was still a barrier to participation. Both projects found they had higher participation rates when offering to fully fund tank installations (along with a simpler application process).

**7. 100% community participation is unlikely.** Despite dedicated efforts to remove barriers to community participation, which included offering to cover the full costs of tank installations, some property owners refused to participate. The reason for this is unclear, since those properties typically failed to respond to project

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communications. Any project relying on home-owner participation should be planned with less than full support from the target community, and steps taken to ensure it can still meet objectives. For stormwater treatment projects, that might include building redundancies into the network or using a treatment train (a sequence of SCMs) so that stormwater passes through multiple treatments.

**8. Use a range of appropriate, well-timed and integrated communication initiatives.** Adopting a diverse portfolio of communication methods helps to accommodate individual preferences and technological competencies and can help to increase community engagement. A communications and engagement plan should be informed by the demographics of the target audience, as well as the desired nature of participation and the timeframes of the project. Similarly, the community should also be able to register their interest through a variety of means. Although the most time consuming, communication methods that are based on personal interactions (e.g. community information sessions, home visits) tended to be most effective for engaging community members. Conversely, some communications (e.g. project website) were not influential for participant recruitment, although they provided other benefits. For the websites, this meant acting as a long-term source of project information, thus helping to support longer-term community engagement.

**9. There are added benefits to involving the community in stormwater management.** Directly involving the community provided additional benefits, by increasing awareness and care for the local waterway. This largely stems from the education efforts used by both

projects (e.g. brochures, newspaper articles, community information sessions) that sought to increase the community's understanding of runoff impacts and associated management, as well as their potential role in protecting their local creek. Having a better-informed community increases water literacy, which can improve uptake of water saving devices, increase use of water saving strategies and foster higher acceptance of alternative water sources.

**10. Consider the long-term engagement of community members.** To ensure SCMs installed on private land operate in perpetuity, community engagement should be sustained beyond the initial installation process. The novelty of any SCM installation can fade over time, leading to neglect and possible system failure. It is important that property owners appreciate the value in the asset and its operation, for themselves (e.g. water savings) and the broader environment (e.g. waterway health). Ongoing engagement can help to maintain this understanding, especially the altruistic values. This could be facilitated through ongoing communication or updates on the measured benefits of the SCM network (e.g. changes in stream condition, total water savings). Provision should also be made for maintaining community engagement when properties change ownership; either through information packages for new owners, information on the assets themselves (e.g. a QR code to online resources for additional information), and regular, free inspections.

### For more details on the outcomes of this project, please refer to:

- Brown, H. L., Bos, D. G., Walsh, C. J., Fletcher, T. D., & RossRakesh, S. (2016). More than money: how multiple factors influence householder participation in at-source stormwater management. *Journal of Environmental Planning and Management*, 59(1), 79-97.
- Bos, D. G., & Brown, H. L. (2015). Overcoming barriers to community participation in a catchment-scale experiment: building trust and changing behavior. *Freshwater Science*, 34(3), 1169-1175.
- Walsh, C. J., D. G. Bos, M. J. Burns, M. Imberger and T. D. Fletcher (2023), "Restoring the health of urban streams through stormwater management: A synthesis of the Little Stringybark and Dobsons Creek research projects", Technical report 23.2, Melbourne Waterway Research-Practice Partnership.
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