Physical monitoring strategies – a working paper for discussion

Physical monitoring means different things to different people, depending on the types of activities involved, and the purpose of those activities.

Physical monitoring has been traditionally used in stormwater management to:
- refer to technical data collected from structures, devices and environments,
- usually by stormwater engineers, maintenance staff and designated ‘experts’ (at the pipe-end),
- The data may be based on samples of ‘gross pollutants’, physical matter, liquids, vegetation, or flora and fauna. It may also be based on routine observations and systematic record-keeping.
- Data is often analysed statistically and/or chemically, and results are expressed in terms of pollutant loads, contaminants etc.
- Results are generally disseminated to a small community of academic and engineering ‘experts’, government departments and statutory authorities.
- It can be costly in terms of staffing, resourcing, analysis and maintenance.

There are other types of physical monitoring involving a range of people, experts, professionals, organisations and departments, depending on the purpose and nature of the monitoring activity.
- To inform State of the Environment reporting processes
- To monitor physical changes over time
- To inform budget decisions, resource allocation, and service provision
- To inform and educate community and organisations

What is the role of physical monitoring in this project, and what does that tell us about the types of activities, the participants, and how it will be used?

The Bronte Gully Catchment Project aims to support, develop and evaluate inclusive community and organisational processes to improve water quality at Bronte Beach. It fundamentally emphasises community participation in managing stormwater pollution.

Approaches to stormwater pollution have traditionally relied on end-of-pipe monitoring and ‘top-down’ community education initiatives. This project is different, by focussing on reducing pollution at source. It has been specifically funded to develop inclusive, integrated and sustainable solutions to stormwater quality, by the community for the community. The community includes residents, businesses, Council, sporting and leisure clubs, schools, visitors, and others who may use, live, or work in the area.

Project outcomes include:
- increased levels of community participation and involvement;
- positive improvements in knowledge, attitudes and motivations;
- establishment of self-governing sustainable participatory processes;
- changes in behaviour, policy and practice;
- ongoing integrated activities to improve water quality and monitoring of those processes

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• evaluation of the effectiveness of these participatory processes in developing sustainable, integrated approaches to stormwater management.

**Therefore, what is the role of physical monitoring in this project?**

• to engage with and involve the community
• to encourage active learning and to raise awareness
• to identify what the community sees as the issues
• to collect baseline information about those issues.

What do we want the community to physically monitor?

• Issues and hotspots identified by the community
• Source control issues

**How do we want to do it?**

**Established stakeholders**

• Distribute disposable cameras to community members and ask them to photograph hotspots every two days for one week
• Ask two bushcare groups to do same on fortnightly basis (weekends) over one month
• Ask Council lifeguards to do same (only available weekends) over one month
• Photographs to be supplemented by one page record sheet
• This to be set up to begin in first week of March.

**Non-traditional stakeholders**

• Publicity campaign to raise profile of project
• Media invitations to participate
• Web-based information
• Specific approaches to groups and individuals (posties, SLSC, visitors, etc etc)
• Activities as above.
• To begin late March

**Activities involving organisational stakeholders**

• GPT monitoring – twice, maybe three times across life of project
• Beach-raking audit (proposed for April)
• Parks audits
• Throughout

**When should it be done?**

• In the beginning, middle and end (community engagement/development phase; during participatory process phase; during capacity-building/integrational phase).
• Whenever traps are emptied

**Who can we involve? See above**

• Members and contacts of existing community groups (KBB; Surfrider; Bushcare groups etc); council staff (community engagement phase)
• People who are not usually involved (participatory process phase);
• 'Traditional' and 'non-traditional' participants (capacity-building/integrational phase).