

Invitation to participate

Replenishment of Forrestdale and Thompsons Lakes with stormwater

Project aims

1. To consider the benefits and risks of potential replenishment of Forrestdale and Thompsons Lakes with stormwater from surrounding areas.
2. To undertake a trial program of waterway modification in the upstream catchment of Forrestdale Lake to increase flows whilst managing water quality and other potential impacts appropriately.

This project will examine the viability of upstream catchment modification to increase stormwater flows into Forrestdale and Thompsons Lakes.

Project outline

This project will examine the viability of upstream catchment modification to increase stormwater flows into Forrestdale and Thompsons Lakes.

Research into adaptation strategies for these important lakes is underway as a part of the CRC for Water Sensitive Cities research program and supplementation of the lakes with stormwater sourced from development in surrounding areas is under consideration. This project will contribute to ongoing research in this area by considering the potential for supplementation from currently rural upstream catchments of Forrestdale Lake.

Drainage from rural land in the upstream catchments of Forrestdale Lake has historically contributed to the Lake, but through changes to land management practices and reduced maintenance of the drains, as well as climate effects, regular contributing flows from these catchments have declined. Whilst it is recognised that urbanisation of surrounding land can ultimately deliver more significant inflows, the associated benefits and risks of impacts from these discharges will need to be properly understood in order to appropriately manage more widespread adoption. The proposed small rural catchment pilot project has the benefit of a relatively simple process to roll-back any negative impacts.

The project will include the following specific phases:

1. Review and characterisation of upstream contributing catchments including land use review, hydraulic and hydrological modelling, monitoring and establishment of baseline water quality.
2. Selection of sites for pilot waterway modification, likely to include selection of a single small upstream catchment and drainage system for targeted physical works.
3. Physical works to convert selected existing drains to living streams including clearing of sediment and weeds, modifications to cross section and longitudinal sections to increase flow rates, revegetation and integration of instream water quality treatment systems where necessary.
4. Monitoring of the impacts of the works to establish the risks and potential benefits of more widespread works.

Project benefits & beneficiaries

WA State government – the project is specifically aimed at delivery of State Government commitments # 85, 88 and 89 of the Green Growth Plan: Action Plan F MNES Conservation Commitments. The project has significant potential benefits to the environment within and surrounding these internationally important wetlands.

Local Government – the project has the potential to provide significantly improved environmental and community outcomes by improving the long-term sustainability of these important natural assets and reducing requirements for creation of new constructed assets to manage water separately.

Landowners – the project has the potential to significantly change the relationship between land development and natural environmental assets by providing landowners with practical ways to contribute to their long term sustainability.

Project cost and timeframe

The approximate expected cost for the completion of stages 1 and 2 of this project is \$20,000 and they can be completed in a timeframe of approximately 3 months.

The cost of subsequent stages is dependent on the extent and nature of works recommended and will be established on completion of task 2.

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