# WELLBEING IMPACT ASSESSMENT

*<Delete any grey explanatory text prior to finalisation of the WIA. Please refer to the Wellbeing Impact Assessment Drafting Guide for tips to complete a WIA.>*

## Proposal Name: Expanding Healthy Waterways-Catchment Plans

EPSDD

## Purpose of proposal

We are proposing a program of works and activities to significantly advance our goal of clean rivers, lakes and ponds in the ACT

## Impact description

- Across Canberra, improved awareness of water quality issues and adoption of household and municipal practices that reduce the occurrence of waterway pollution.
- More effective stormwater treatment systems in six selected subcatchments where new water quality assets (e.g. constructed wetlands and raingardens) are built.
- Improved urban ecosystem function locally where non-polluting practices are adopted and water quality assets are built.
- Reduced urban heat and risks of heat stress near where water quality assets are built.
- Greatly enhanced capability for Government to reduce the incidence of algal blooms in Canberra's urban lakes and ponds, and to restore riverine habitats in rural areas, through catchment plans underpinned by research, monitoring, water quality models and real-time management dashboards.
- Improved cultural benefits and connection to country for the Ngunnawal community and other First Nations peoples.

### Magnitude of Impact

• All impacts should be major (sustained and direct). Infrastructure and restoration works will persist and improve the environment for many decades. The evidence based generated by the project will be valid for centuries.

## Who is affected?

- Around 10,000 residents in the suburbs of Kambah, Richardson, Fadden, Belconnen and Holt, who will enjoy the amenity and recreation opportunities, and reduced heat stress, afforded by water quality assets to be built.
- Many residents across Canberra, responding to an extensive behavioural change program by using less fertilisers, keeping leaves and grass clippings out of their drains etc.
- Environmental advocates, who will see Government action as a plus since the project will result in the removal of substantial amounts of suspended sediments, nitrogen and phosphorus polluting Canberra's stormwater systems.
- TCCS Sports and Recreation and Roads ACT staff, who have been supported to adopt less polluting practices in playing fields and green road verges, respectively.
- SLA, who has been influenced to find less polluting ways to develop new suburbs, and who have committed to Water Sensitive Urban Design features in suburbs that reduce the generation of pollution.
- EPSDD, who will be better able to serve the Government and residents of the ACT with the capability built in the project to create catchment plans with costed options for meeting desired water quality outcome targets.

### Impact on specific groups

- Ngunnawal people, enriched through recognition of a cultural value of importance to them.
- All other specific groups are not targeted but will benefit alongside non-target residents in the localities where works and activities are undertaken.

| Aboriginal and Torres Strait Islander Peoples | Carers | Children and young people | Culturally and linguistically diverse people | LGBTIQ+ people | Older Canberrans | People with disability | Across gender |
|---|---|---|---|---|---|---|---|
| ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

## Wellbeing domain

Environment and climate

Secondary domain is Health

## Timeframe

Between one and five years

## Evidence base and data

### What do we know now? How will we improve our knowledge of impacts?

- The reduction in pollution arising from the five treatments trains of water quality assets (i.e. series of co-located assets) has been estimated using water quality models as ca. 500,000, 5,723 and 568 kgs/year total suspended sediments, nitrogen and phosphorus, respectively. Note, however, that the capital investment in the Expanding Healthy Waterways budget bid will only allow around a quarter of the infrastructure to be constructed. Models have been calibrated using data on the performance of existing water quality assets.
- Phosphorus is the main pollutant being targeted to avoid blue-green algal blooms in our urban lakes and ponds. An estimated 600kg of phosphorus pollution will be avoided across Canberra by the behavioural change work. For context, Lake Tuggeranong, which is closed from algal blooms three months per year, receives 500kg phosphorus pollution each year. The behavioural change program could reduce pollution in this catchment by 100kg per year. This level of avoided pollution is like the amount intercepted by seven water quality assets recently constructed in the catchment at a cost of $29M. The estimated benefits are based on a 40% adoption of non-polluting behaviors by householders, which is consistent with results of surveys of residents conducted after pilot behavioural change projects were completed. The estimates do not include potential

additional positive impacts arising from the behavioural change program from reduced fertiliser use and increased disposal of lawn clippings in green bins.

- The estimate of residents receiving amenity, recreational and heat stress benefits are based on anecdotal evidence of resident's use of recently constructed, large water quality assets. Calculations are: number of visits to an asset per day (48, i.e. one group every 15 minutes during daytime) x number per group visiting (average of 2) x 265 days/year (discounting 100 days of bad weather) x percent of first-time visitors per group (10%) x number of large assets to be constructed in the project (4). The numerous small assets that will be built will also improve amenity in the same way as street trees, but the benefits are harder to quantify. The amenity/recreation benefits of both asset classes will be quantified through surveys to be conducted in the project. Stage 2 of Healthy Waterways will set the city on a pathway to ensuring its urban lakes and ponds are algal-bloom free, which will have substantial amenity and recreational benefits.

**What do we need to know?**

- An understanding of the sources of pollution and dynamics of pollutants as they progress down catchments will be greatly improved by research contracts in this project. This knowledge will shape how management actions to mitigate pollution are shaped, i.e. if you don't understand the problem you can't craft effective solutions to it.
- Estimates of the pollution reduction benefits of infrastructure will be continuously improved as the project progresses through extensive monitoring of pollution in waterways and of the performance of wetlands and other recently constructed infrastructure.
- The estimated benefits of behavioural change projects will be progressively improved as the Healthy Waterways program progresses through 1) research that will refine the estimates of the load of phosphorus delivered to stormwater by street trees and 2) extensive monitoring of both the response of householders to the program and actual reductions in leaf litter in drains.

## Collaboration and Engagement

- Previous versions of this bid have been reviewed by Treasury and MPC.
- A project steering committee provides oversight of the project by EGM/EBM-level representatives from EPSDD, TCCS, MPC, and CMTEDD (Treasury). This will transition to the Office of Water DDG-level governance body once it is established.
- Key stakeholders from several sections of TCCS are being kept up to date with planning of proposed new water quality infrastructure through weekly design team meetings and design review workshops for each proposed asset.
- Urban residents are being consulted through presentations to local community councils and catchment groups, and direct engagement with various landcare and other 'friends of' community groups. Environmental advocates are a subgroup engaged mainly through the catchment groups, landcare and 'friends of' groups. Urban residents will get an opportunity to influence how water quality infrastructure is sited and built through their feedback sought at public meetings as a part of the detailed design of assets. They will also have numerous interactions with project staff and contractors as the behavioural change program is rolled out.
- A wide range of government stakeholders are engaged as dictated by business, including:
    - EPSDD Finance, Procurement, HR and Communications teams.
    - EPSDD divisions like Conservation and Water Planning and Policy, Parks and Conservation Service, Conservation Research and Evaluation, Living Infrastructure, Climate Change and SLA
    - TCCS Development and Coordination, City Presentation and Roads ACT
    - MPC, SLA and Procurement ACT.

  The project team has worked particularly hard to connect with teams in TCCS and MPC through regular catch-ups and meetings.
- The Assistant Director, Traditional Custodian Engagement within Environment, Heritage and Water has been engaged to help guide the interface of this project with the Ngunnawal community. Ngunnawal stakeholders will be engaged as advised by the Dhawura Ngunnawal Caring for Country Committee.

## Measures of Success How will Government know this proposal has been successful?

The three main outcomes of this project are 1) to make material local and subcatchment improvements in water quality and 2) to draft effective plans for solving water quality problems and 3) to create a strong foundation for ongoing work to solve water quality problems through the development of an evidence base and healthy, coordinated relationships between Directorates and business units involved in water management.

The success of our efforts to improve water quality can be gauged by the monitoring of pollution levels in individual waterways and subcatchments, with the monitoring program designed to gauge the performance of water quality assets and behavioural change and river restoration programs.

The effectiveness of catchment plans can be determined by whether options provided in them form the basis for ongoing Government actions, and whether they serve to attract funding for future water quality programs, especially from the Australian Government.

The strength of the foundation for ongoing water quality improvements can be gauged by the nature of support for future work by both internal and external stakeholders. The idea is that a demonstrated commitment to evidence-based management will result in more effective solutions, building trust in Government, and more defensible in the face of inevitable uncertainties. And if stakeholders, particularly internal ones from other business units and Directorates, are brought along on the journey and allowed to influence plans for future work, the implementation of the solutions to water quality problems that are adopted will occur more smoothly.

It will also be possible to gauge the impact of the project on specific priority groups and allied Government programs, e.g.

# WELLBEING IMPACT ASSESSMENT

- Improved cultural benefits and connection to country for the Ngunnawal community and other First Nations peoples can be gauged through consultation with peak bodies e.g. the Dhawura Ngunnawal Caring for Country Committee.
- The amenity and recreational benefits of new water quality assets can be determined through surveys of residents using the new sites.
- The evaluation of the effects of the project on reducing urban heat and risks of heat stress can be determined through evaluations carried out in collaboration with EPSDD Living Infrastructure.

## Planned Evaluation

This project has a strong component of monitoring and evaluation as a part of every major activity. This is both for the purposes of accountability and so that the options for stormwater improvements and their associated costs and benefits can be better quantified, and thus used to underpin both catchment plans and future budget bids. There will be monitoring of:

- the effectiveness of EPSDD engagements with SLA and TCCS on changing polluting practices by city services
- the effectiveness of the behavioural change program in changing polluting practices by residents
- the effect that changes in resident's practices have on reducing pollution loads in stormwater systems
- the performance of water quality assets in reducing pollution
- the technical capability created by EPSDD (e.g. can waterway management scenarios be modelled to underpin the drafting of catchment plans in all selected catchments?)
- the amenity and recreational benefits of new water quality assets, through surveys of residents using the new sites.

The evaluation of outcomes—the measures of success discussed above—is not planned as an activity in this bid but is possible, as described above.