

Valuing green infrastructure and public places

CASE STUDY



How Sydney Water secured funding to protect our waterways

The challenge

Sydney Water is responsible for approximately 450 kilometres of stormwater and waterway infrastructure spread across more than 70 catchments in Greater Sydney. Stormwater pollution can significantly impact waterway health and reduce a city's liveability.

Waterway Health Improvement Program

Sydney Water developed the Waterway Health Improvement Program (WHIP) to mitigate the damage that stormwater pollution does to waterways in Sydney. The details of the WHIP are outlined in the table below:

Table 1. Waterway Health Improvement Program proposals and expected benefits

Proposed program interventions	Expected benefits from the program
<ul style="list-style-type: none">Planting and then maintaining native vegetation in open spaces and next to creeks and waterwaysCreating and then maintaining wetlands next to stormwater channels and pipes and redirecting stormwater flow through the wetland, before returning it to the stormwater channelsInstalling trash racks and booms to collect litterConstructing recreation facilities such as bicycle and pedestrian paths, seating and shelters, boardwalks and viewing platforms in locations where extra native vegetation is planted and wetlands are created	<ul style="list-style-type: none">Remove 100,000 kg/year of sediment from the waterwaysPrevent 1,500 kg/year of nitrogen and 750 kg/year of phosphorus from entering these waterwaysRemove 100 m³/year of litter from these waterwaysAchieve a 1,000 ML/year reduction in annual runoff through these waterways



Parramatta River

While the costs of implementing these initiatives can be readily calculated, monetising and attributing the community benefits from improved waterway health is challenging. This can make securing funding for such projects difficult.

How they did it

There was no market data that could be used to monetise the benefits of the WHIP, so a non-market valuation technique was required. Sydney Water decided to use choice modelling to estimate the monetised benefit values of the WHIP. This was done by undertaking a study whereby residents were asked how much they would be willing to pay to improve waterway health across different scenarios.



Parramatta River

Results

The study found that households in the catchments of the Georges, Cooks and Parramatta Rivers have a positive willingness to pay for the outcomes of the WHIP. On average, households were willing to pay:

- \$0.93 per annum for 10 years for every extra kilometre of waterway in good health in 30 years' time
- \$0.18 per annum for 10 years for every additional hectare of native vegetation planting, including wetlands, in 30 years' time
- \$0.10 per annum for 10 years for every additional set of recreation facilities built in local open spaces used for stormwater management, in 30 years' time
- \$0.18 per annum for 10 years for every additional garbage truck load of rubbish and litter removed from the waterways each year.

The monetised values from the study were suitable for use in a cost-benefit analysis of WHIP alternatives.



Valuing green infrastructure and public spaces

Green infrastructure and public spaces are essential for liveability, and provide social, economic, environmental and cultural value to communities.

The NSW Government is creating a sector-specific framework to help better value these important assets. The framework will be used to help prepare economic evaluations, including cost-benefit analysis, to ensure a consistent valuation approach is applied in future projects.

To find out more visit:

dpie.nsw.gov.au/valuegreenpublicspaces

© State of New South Wales through Department of Planning, Industry and Environment 2021. The information contained in this publication is based on knowledge and understanding at the time of writing (August 2021). However, because of advances in knowledge, users should ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate departmental officer or the user's independent adviser.