

As part of the ACT Government's Climate Adaptation Strategy, trials of new innovations are increasing the ability of our community to adapt to climate change impacts, reduce greenhouse gas emissions and build a more sustainable city.

# CLIMATE ADAPTATION INNOVATION

## Biggest rain garden in the Southern Hemisphere

This innovation will detain and filter stormwater from surrounding suburban areas into Tuggeranong Creek at the Upper Stranger Pond, before entering Lake Tuggeranong and the Murrumbidgee River.

### DETAILS

Located in parkland beside Upper Stranger Pond, the rain garden will cover an area of 5,200 m<sup>2</sup> (more than 10 netball courts). When it rains, it will treat about 1,800 litres of stormwater per second (equivalent to an entire Olympic swimming pool every 23 minutes), before it enters Lake Tuggeranong.

Urban runoff (stormwater) is the biggest source of water pollution in ACT creeks and lakes, posing a risk to public health and aquatic life, plus threatening the many social, economic and environmental benefits that lakes and waterways offer.

The rain garden is being constructed as part of the ACT Healthy Waterways project – a \$93.5 million joint venture of the territory and federal governments to improve water quality in the ACT and further downstream in the Murrumbidgee River system. The Lake Tuggeranong catchment was identified as a priority when planning for ACT Healthy Waterways first began.

### INNOVATION

Once complete, the rain garden at Upper Stranger Pond will be the biggest in the southern hemisphere. Rain gardens are generally self-watering, low maintenance gardens, designed to protect our waterways and lakes by detaining stormwater. The physical processes in the soil and the biological properties of the plants, roots and soil microbes treat low level pollution and nutrients.





## CLIMATE CHANGE BENEFITS

- > Slowing water down during periods of extreme rainfall events will reduce the impact of flash flooding.
- > Increasing water in the landscape, even for short periods of time, will cool the surrounding area.
- > Increasing rainwater infiltration into groundwater sustains healthier deep rooted trees that provide shade and capture and store (sequester) atmospheric carbon.

## CO-BENEFITS

- > Increased biodiversity of land and water species.
- > Enhanced open spaces for recreation.
- > Reduced downstream erosion and sedimentation.
- > Improved quality of water in downstream lakes and waterways.

Canberra's climate is already changing, and in future the ACT can expect more **EXTREME WEATHER EVENTS.**



### Heatwaves

will become hotter, more frequent and last longer.



### Droughts

will increase in severity and frequency.



### Storms

will become more intense, causing flash flooding.



### Bushfire

weather will become more dangerous.

A certain amount of warming is already locked in. The ACT Government is committed to ensuring Canberra adapts to the changing climate, so that it can remain a vibrant, resilient and liveable city.

**To learn more about how to help keep ACT waterways healthy and adapt to climate change, visit [www.act.waterwatch.org.au](http://www.act.waterwatch.org.au)**