

QUESTION TIME BRIEF

Portfolio: Water, Energy and Emissions Reduction

Water Quality (ChiP Results)

General

- Water quality is dependent on the condition of the catchments and levels of nutrient or other pollutants in those catchments.
- All Canberrans, including the government, business, community and individual have a responsibility to help improve the quality of ACT's stormwater by keeping rubbish, leaves and fertilizer out of drains and waterways.
- The Healthy Waterways Program and water governance reforms are key elements of the government's strategy to improve the health of our lakes and waterways.
- \$14 million was committed by the ACT Government in April 2022 to expand the Healthy Waterways initiative. This investment will deliver catchment planning and the construction of new water quality assets to target the sources of pollution entering our lakes and ponds.
- The Catchment Health Indicator Program report known as the ChiP report helps the government monitor the health of rivers in the Upper Murrumbidgee.

ChiP Report 2022

- The Catchment Health Indicator Program report known as the ChiP report provides a "catchment health score" of river reaches in the Upper Murrumbidgee, displayed in individual report cards.
- The purpose of the ChiP report is to give the community a better understanding of water quality and waterway health issues in the catchment and provide a baseline assessment to assist natural resource managers and policy-makers.
- The 2022 ChiP report was released on World Water Day, 22 March 2023. It provides 97 report cards that are based on 1,992 water quality surveys, 192 waterbug surveys and 232 riverbank condition assessments across 237 sites.
- Overall, 54% of reaches fell into the excellent/good range which is the best result in the ChiP's nine-year history, breaking the previous record set in 2021.
- Planting a diversity of native vegetation both in and along our waterways will help make our catchments more resilient to extreme weather conditions that have been experienced in the past few years.
- I thank the Waterwatch volunteers for their valuable contribution.

Blue-Green Algal Blooms

- Blue-green algal blooms in the ACT's lakes and waterways remain a considerable challenge. In some instances, these blooms have required the closure of Lake Tuggeranong and Lake Ginninderra to primary contact activities.

Cleared as complete and accurate: 18/06/2023
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- The Government continues to invest in the ACT Healthy Waterways program to address these problems. However, the government cannot solve these problems on its own which require whole of community action.
- The ACT Healthy Waterways program is creating catchment plans to address problems like lake closures due to blue-green algae or faecal coliforms.
- The first catchment plan will be for Lake Tuggeranong. A draft of this plan is expected by the end of the year, with the remaining plans being delivered in 2024 and early 2025.

Murrumbidgee River (bacterial contamination)

- The bacterial loads within the Murrumbidgee River are symptomatic of land and water management activities upstream of the ACT.
- The poor health of the Murrumbidgee River is a testament to the importance of cross-border collaboration on water management activities and the broader Murray-Darling Basin water reforms.
- The ACT Government remains engaged with the NSW and Australian governments to highlight the risk to human health and water security from upstream water and land management and identify solutions.

Lake and Waterways Closures

- As of 11 May 2023, sites **closed** for swimming (primary contact recreation) include:
 - Lake Tuggeranong – all recreation areas (blue-green algae – extreme alert level)
- Lake and river closure information can change rapidly. For up-to-date information on all waterways, we have an online reporting tool:
https://www.cityservices.act.gov.au/news/water_quality_in_our_lakes_and_ponds
- The Environmental Protection Authority monitors lake water quality for blue-green algae.
- For information on Lake Burley Griffin, visit The Swim Guide website.

Research

- Research is continuing on several fronts:
 - The University of Canberra is investigating the sources of nutrient pollution across urban areas of the Lake Tuggeranong catchment.
 - NCEconomics and an ANU researcher are investigating social and economic values of Canberra urban lakes and the impacts of blue-green algal blooms.
 - Smaller investigations are being conducted into:
 - Evaluating the effectiveness of the Leaf Collective
 - The source of faecal contamination in ACT waterways
 - How to design constructed wetlands as good habitat for re-introduction of the Green and Gold Bell Frog.

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- Good practices in stormwater maintenance.
 - The applicability of landcare guidelines for water sensitive drainage lines, developed for Melbourne, to Canberra's urban environments.
 - Upgrading the ACT's water sensitive urban design technical standards.
 - Quantifying subcatchment inflows to Lake Tuggeranong
- Healthy Waterways is supporting the Nature in the City grant program as a way to create more water sensitive green space.

Background

Waterwatch

- Upper Murrumbidgee Waterwatch supports the community in the monitoring and caring of our local waterways. The program has been running for over 25 years and has sites right at the top of the Murrumbidgee River in Kosciusko National Park, all the way down to Taemas Bridge where the Murrumbidgee enters Burrinjuck Dam near Yass.
- Two primary functions of the Waterwatch program are to facilitate community engagement through the monitoring and care of local waterways, and to use the data (water quality, waterbugs and riverbank condition assessments) as an early warning system for aquatic ecosystem health issues.
- There are now over 30,000 Waterwatch water quality surveys on the Atlas of Living Australia database dating back to 1995.
- Waterwatch works in partnership with the three community catchment groups (Molonglo, Southern ACT and Ginninderra) to implement the Waterwatch program. The ACT Government has provided funding through to June 2023 for the coordinator positions which are essential for training and supporting the volunteers.
- An additional coordinator is funded through Icon Water to support volunteers to monitor waterways in the Cooma Monaro region, upstream of the ACT. This allows Waterwatch to work with regional partners and collect water quality data on a truly catchment scale.

CHiP 2022

- 8 report cards received an Excellent (A);
- 44 received a Good (B) result;
- 44 received a Fair (C); and
- 1 received a Poor (D) result.

Bacteria (intestinal Enterocci):

- Bacteria (Enterococci) are indicators of fecal material in the water and the possible presence of disease-causing bacteria, viruses and protozoa.

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- Bacteria levels are known to become elevated after rainfall due to run-off from stormwater pipes, grazing land and upstream water bodies.
- The ACT Health Protection Service conducts weekly water testing for bacteria from September to April each year. Tests are performed weekly due to the increased likelihood of primary contact activities during warmer weather.
- City Services may display the 'Area Closed to Primary Contact' sign as a precaution if there has been significant rainfall since water samples were taken. However, bacteria levels may be high after rainfall even if the 'Area Closed to Primary Contact' sign is not displayed.

Portfolio: Water, Energy and Emissions Reduction

Murray Darling Basin (MDB) Water Reforms within the ACT

Talking points:

- The Murray-Darling Basin water reforms provide the appropriate scale of management, across State and Territory borders, to respond to our climate emergency and safeguard the long-term security of our water resources.
- The ACT is working with the Australian Government to finalise its water recovery commitment by June 2024.

ACT's water recovery commitment (4.9 GL Shared Reduction Amount):

- Earlier this year, the Australian Government announced changes to its approach for finalising water recovery commitments. This provides the ACT Government greater flexibility to meet its commitment than through the previous water efficiency program.
 - This flexibility removes the dependency of implementing water efficiency measures to provide the water recovery by 2024.
- The ACT Government is working with the Commonwealth Department and with Icon Water to redefine the ACT water recovery proposal and finalise the water recovery commitment before the Basin Plan deadline of 30 June 2024.

water trading

- The ACT Government is working with the NSW and Australian Government to develop water trading arrangements under the Murray-Darling Basin Agreement and Basin Plan. The trading arrangements have not been finalised however negotiations continue to progress.
- The ACT Government will manage the ACT's water supplies to ensure that the ACT's water take remains within the Sustainable Diversion Limit, as required under the Murray-Darling Basin Plan and the ACT Water Resources (Water Available from Areas) Determination 2019.
- Current water use by the ACT is not limited by the Sustainable Diversion Limit.

Key Information

- The Australian Government is providing approximately \$2.6 million to support the implementation of Murray-Darling Basin water reforms within the ACT during 2021-2024.
- Priorities for water management reform within the ACT over the 2021-24 period include:
 - advancing the water interests of Ngunnawal Traditional Custodians
 - renewing the ACT's policy for 'Non-urban water metering'

- climate vulnerability and water security planning to build resilience in the environment and community of the ACT and surrounding region, and
- delivering water for the environment by returning at least 4.9 gigalitres to the basin.

Background Information

- The Basin Plan was established in 2012 under the *Water Act 2007* (Cwlth).
- Programs developed to implement the Basin Plan are scheduled to conclude by 2024. This includes measures under the Sustainable Diversion Limit Adjustment Mechanism.
- The Murray-Darling Basin Authority is required to conduct an evaluation of the Basin Plan implementation by 2025 and a review of the Basin Plan by 2026.

ACT Shared Reduction Amount

- The Basin Plan commits the ACT to 4.9 GL of water recovery for achieving shared environmental outcomes within the southern connected basin.
- In February 2023, the Australian Government announced that it is seeking to finalise all Bridging the Gap commitments (including shared reduction amounts) by 2024 through strategic purchases of water entitlements.
- A revised ACT water recovery proposal has been developed to align with the Commonwealth's Strategic Water Purchasing Framework and is being negotiated amongst ACT and Commonwealth officials.
- Previous attempts have been made to meet the ACT water recovery commitment:
 - In 2014, the Australian Government confirmed the settlement of 9.383 GL of General Security Murrumbidgee water entitlement from ACTEW. Legal advice received by the Australian Government in 2019 determined this to be invalid.
 - During 2019-22, the EPSDD developed an urban water efficiency project, proposed to deliver up to 6.36 GL. The conditions of the Commonwealth's funding program were not conducive to urban water project and negotiation on bespoke arrangements had commenced.

Portfolio: Water, Energy and Emissions Reduction

Non-Potable Water Pricing Review

Talking Points

- Current non-potable water pricing policy gives golf clubs a 50% discount through the Market Equity Scheme on the non-potable Water Abstraction Charge.
- The government met ACT Golf Clubs in October/November 2022 to discuss the Non-Potable Water Pricing Review, individual irrigation requirements, current pricing policy and potential policy options.
- Formal consultation with stakeholders commenced 7 June 2023 about policy options, to seek feedback and finalise a government response to the Review in 2023.
- The consultation process contacted almost 200 entities, including all non-potable water licensees and significant stakeholders such as Clubs ACT, Canberra Community Clubs, ACT-Monaro District Golf Association and ACT Rural Landholders Association.
- Consultation closes 7 July 2023. A listening paper will be prepared to document feedback and inform a final government response.
- The government acknowledges that the timeframe to reach a final position to respond to the Non-potable Water Review has been protracted and that licensees are seeking price certainty for forward planning.
- I recognise water pricing is a complex issue and the circumstances of each licensee are unique. Many potential policy options have been assessed to try to achieve a balanced outcome that is fair and equitable for all licensees, not just golf clubs.

Belconnen Golf Club (Owned by Burns Club, formerly Magpies Golf Club):

- Senior officials from the Office of Water and the Belconnen Golf Club met in March 2023 to discuss current non-potable water pricing arrangements.
- The situation with Belconnen Golf Club is unique. The Belconnen Golf Club is established in an area that has limited access to cheaper sources of water. The club is reliant on treated wastewater that includes costs for treatment and pumping.
- Treated water provided to Belconnen Golf Club by Icon Water is under a confidential and commercial contract. The government has no influence in relation to this contract but notes the ICRC has reviewed the price of water supplied under this contract.
- Costs for the operation of clubs need to be shared across those in its membership that directly benefit from the service. Passing on operating costs through increased membership fees is a business decision of sporting clubs.

Key Information

- The Review and any proposed changes to water pricing is restricted to non-potable water use only and will not affect potable water charges. For example, sportsgrounds that are irrigated 100% by treated drinking water are out of scope.

Cleared as complete and accurate: 09/06/2023
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- Proposed policy is intended to support a nuanced approach to the application of charges for water consumption that seeks to balance the trade-off between affordability and promoting water conservation.
- The Review recommends the financial support for clubs under exceptional circumstances. The nature of this financial assistance is being considered as part of a package of policy measures.

Background Information

Non-potable Water Review

- The ACT Government committed through the Parliamentary and Governing Agreement to ensure that clubs continue to support the community while reducing harm from gaming.
- A review by ACT Treasury into water costs for high-intensity club users of non-potable water was published on the *Your Say* website in December 2021. The aim of the review was to consider the impact of water costs on the operation of clubs while not requiring cross-subsidisation by other ACT water users.
- The scope of the review was limited to non-potable water only. This includes water sourced from rivers, dams and groundwater sources, recycled water from sewage treatment plants and stormwater from the Inner North Reticulation Network. Treated drinking water (potable water) was not part of the Review.

National Water Reforms

- Micro economic reforms related to water pricing have been agreed by successive governments under the National Competition Policy, National Water Initiative (NWI, 2004), Water Act Cth (2007) and the Murray-Darling Basin Plan (2012).
- The ACT is a signatory to inter-governmental agreements that give effect to these water reforms. Specifically, the ACT has agreed to implement water pricing and institutional arrangements that promote economically efficient and sustainable use of water resources, water infrastructure assets, and government resources devoted to the management of water.
- The NWI pricing principles promotes user-pays and pricing transparency, in respect of water supply systems and cost recovery for water planning and management.

ACT Water Strategy 2014-44 Striking the Balance

- The ACT Water Strategy aims to achieve ‘an integrated and efficient water supply system that provides for the optimal mix of supply options, encourages efficient use of water, is resilient to climate variability, and secures the social, economic and environmental needs of the ACT community’.

Portfolio: Water, Energy and Emissions Reduction

ACT Water Metering Policy (Non Urban Users)

Talking points:

- The Office of Water is working in partnership with the Environment Protection Authority (EPA) to update the Non-urban Water Metering Policy.
- Consultation with licence holders on the draft policy closed on 22 May 2023. Feedback has been considered and the final draft policy will be considered by the government in the second half of 2023.
- The updated policy ensures continued alignment of the ACT with best practice regulation and the Australian Standard for non-urban water metering.
- The accurate and timely measurement and report of water underpins effective resource management and provides public assurance that water is being managed sustainably.

Key Information

- The policy does not apply to individual water meters that measure potable drinking water supplied by Icon Water.
- The policy will affect approximately 180 licence holders, ranging from large commercial irrigators to private use of small groundwater bores.
- The update of the policy demonstrates the ACT's commitment to improved water metering and measurement within the broader Murray Darling Basin and nationally.
- The policy is expected to take effect in 2023. Implementation will be rolled out in stages and is expected to be completed by 2025.
- Each licence holder is responsible for their costs associated with the installation, maintenance and reading of a water meter.
 - Ongoing validation of accuracy is approx. \$300-500 per meter every 5 years, payable by licence holders to external meter validators. However, options are being explored for the EPA to perform meter accuracy validation, which may reduce costs for licence holders at implementation roll-out.
 - If new water meters are required, the cost for a licence holder to purchase and install a water meter is approximately \$3,000 per meter.

Background Information

- The National Water Initiative (2004), the National Framework for Non-urban Water Metering (2009), and the Murray-Darling Basin Compliance Compact (2018) requires States and Territories to implement consistent water metering standards to ensure equity around water sharing and the protection of water resources.

- The Metrological Assurance Framework 2 (MAF2) is a part of the National Framework and describes the key requirements to ensure a nationally consistent compliance approach for non-urban water meters to comply with Australia Standard 4747: Meters for non-urban water supply (AS4747).
- The policy transitions current EPA non-potable metering guidelines to the Australian Standards by including several key new requirements:
 - use of pattern approved meters;
 - validation of meter installations by a certified person;
 - ongoing meter maintenance and accuracy testing; and
 - improved reporting and notification requirements for licence holders
- The Commonwealth's Inspector General Water Compliance Murray Darling Basin - Metering Report Card shows that the ACT is the only jurisdiction with 100% of water take metered. The implementation of this policy will enhance reporting on the metering accuracy on the report card.
- The taking of surface water and groundwater in the ACT is regulated under the Water Resources Act 2007 by the EPA.
- The EPA will be responsible for implementing and enforcing the Non-urban Water Metering Policy.

Portfolio: Water, Energy and Emissions Reduction**The Leaf Collective program****Talking Points**

- The Leaf Collective is a community-based social-marketing program that aims to reduce nutrient pollution from leaf litter (this year including grass clippings) through community education and behaviour change.
- The program focuses on increasing community understanding of the connection between leaf litter on their block and algal outbreaks in urban waterways, and helping community to turn leaf litter into a valuable resource.
- It has been designed and delivered by Social Marketing @ Griffith (based at Griffith University) in collaboration with multiple community organisations and individuals, as well as ACT Government stakeholders.
- Non-Government partners include: the ACT Catchment Groups, Tuggeranong Community Council, Scouts ACT, SEE-Change, Canberra Organic Growers Society, The Compost Revolution, Communities at Work, Corkhill Bros, Brindabella Waste and Capital Scraps Composting.
- Two pilot program evaluations have demonstrated success in changing social norms and behaviours. For example, the volume of leaves that survey participants reported collecting increased by 13% after the 2021 autumn campaign and by 11% after the 2022 summer campaign.
- The focus areas for the current autumn campaign are suburbs in the Lake Tuggeranong and Yerrabi Pond catchments.
- The campaign was launched on 2 May and concluded on 9 June. Followup surveys commenced on 10 June and will help identify the impact of the program.

Background Information

- Diffuse-source nutrient pollution from urban areas has been identified as the primary contributor to elevated nutrient levels in the lakes of Canberra.
- An expert-elicitation survey has been undertaken to rank categories of householder behaviours for their potential to reduce nutrient pollution entering waterways. Behaviours related to reducing nutrient pollution from leaves were identified as having the greatest potential impact.
- Focusing on specific sources of nutrient pollution with separate interventions to support behaviour change is most effective, as each behaviour has specific barriers that need to be targeted. It also allows the most accurate measurement of impact and cost-effectiveness.
- Research into whether and how to support reduction of fertiliser run-off by householders and garden service professionals is underway.

Cleared as complete and accurate: 18/06/2023
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- The Healthy Waterways team will collect and analyse footage of leaf litter in street gutters in the treatment and control areas from cameras on green-bin collection trucks, to help assess the impact of the program and its cost-effectiveness in reducing nutrient pollution.
- Griffith University has contributed in-kind support to this project which they estimate at a value of \$140,000. This includes un-charged staff time from a senior professor, a senior researcher, and an honours student.
- As part of the Expanding Healthy Waterways initiative, there has been agreement to design, deliver and evaluate a scaled-up Leaf Collective program in 2022-23.

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Healthy Waterways Program

Higgins Raingarden

- The government has finalised consulting with the community about a proposed raingarden for Street Park in Higgins
- The designed has evolved from a bioretention swale on engineering grounds.
- The revised design has been presented to the community and efforts made to gauge acceptance and gain feedback, guided by a Communications and Engagement Plan, before submitting the revised project for Development Approval.
- Feedback about the project has been positive. A final engagement report is being prepared.

Procurement of Monitoring Contract

- The government has commenced a procurement process for a range of services associated with water quality monitoring in the ACT. These include healthy waterway asset performance monitoring, water quality monitoring and stream flow assessments.
- The four ACT Healthy Waterway sites to be monitored include the raingarden in Isabella Plains, raingarden in Woden near the flood memorial, wetland in Fyshwick adjacent to Eyre Street and the wetland in Melba.
- The procurement has been evaluated and negotiations with the successful contractor are being finalised. Works, which will include moving monitoring equipment to ACT Healthy Waterways assets will begin before the end of June.

General

- Through Stage 2 of the ACT Healthy Waterways program, the Government continues to invest in new stormwater infrastructure to help improve the quality of stormwater entering Canberra's creeks, lakes, and rivers.
- Two assets have been completed:
 - A set of four bioretention swales at Kambah Playing Fields have been built and are nearly fully accepted for initial handover.
 - A pair of floating wetlands were deployed in Yerrabi Pond in February 2023.
- Six more assets are scheduled to be built before the end of 2023. A contract has been awarded to renaturalise 500m of the Tuggeranong Creek drain from just west of Tharwa Drive to the end of the Calwell Playing Fields. The renaturalisation will treat nutrients draining from the playing fields and may serve as 'stage 1' of a more extended drain naturalisation.
- A second contract will be awarded on 8 June to create roadside drain outlets to greenspace in 52 spots in Kambah. The idea is to reconnect the runoff to its catchment,

Cleared as complete and accurate: 18/06/2023

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where it can be absorbed, maintaining trees and other valuable vegetation, and is naturally cleansed by soils.

- A third contract will be awarded on 15 June to recycle stormwater for use in watering the Kambah Playing Fields near the Burns Club. This will replace significant potable water use by the playing field managers. To mitigate health risks the water will be cleaned to potable standard before being stored and used. Preliminary costings suggest that the savings in charges for potable water will cover the operations and maintenance costs of the pumps and water filters.
- A project restoring the rural/conservation catchment of the Naas/Gudgenby is well underway.

Future Healthy Waterway Developments

- Six wetland and other water quality infrastructure projects should be completed by the end of the year:
 - Naturalisation of drains entering Tuggeranong Creek at Isabella Plains which will both clean water and allow it to infiltrate into the groundwater. Construction of this asset will start in June.
 - Naturalisation of drains entering Tuggeranong Creek at Calwell (South of Johnson Drive).
 - Reconnection of old creek line at Richardson (Tuggeranong Homestead).
 - Water re-use from water quality pond in Kambah (Kett Street)
 - 2 small pocket bioretention basins within Fadden which will provide a useful proof of concept for at-source treatment of stormwater.
 - 56 drain outlets linking small drains to adjacent green space, to help naturalise urban catchments in Kambah.
- A seventh project involving Wetlands at Belconnen Oval and will explore the benefits of subsurface (gravel bed) wetland elements.
- Public consultations in relation the project, resulted in a significant delay to approvals but means that it now has strong support from the Belconnen community.

Study of Fertiliser use in the ACT

- Contractors investigating fertiliser use by ACT residents and gardening businesses have delivered their final report.
- There appears to be an extremely large amount of fertiliser being applied annually by both residents and residential gardening businesses. The Healthy Waterways team is considering the implications of these findings, but fertilisers may be a major source of nutrients driving algal blooms in Lake Tuggeranong.
- There are signs from the study which suggest that options to curb fertiliser use through a combination of behavioural change campaigns and actions taken at the point of sale of fertilisers would be successful.

Cleared as complete and accurate: 18/06/2023

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Key Information

History

- Stage 1 of ACT Healthy Waterways began in 2014 as a \$94 million joint initiative of the Australian and ACT Governments. It was completed in June 2021. Stage 1:
 - Designed and built 19 large water quality assets—raingardens, ponds, wetlands, and channel restorations—according to water sensitive urban design principles.
 - Carried out a major riparian restoration.
 - Conducted a public education/behavioral change program, known as *H2OK: Keeping our Waterways Healthy*.
 - Performed research into pollution, blue-green algal blooms, and control methods.
- The ACT Government invested a further \$1 million to build a floating wetland in Lake Tuggeranong, to begin planning for the next stage of works, and to extend the research program.
- Since February 2021, a total of \$20 million has been invested in 3 tranches of the Parliamentary and Governing Agreement commitment to *Expand Healthy Waterways: \$30 million over 4 years*.