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Environment, Planning and Sustainable Development Directorate

**To:** Minister for Water, Energy and Emissions Reduction

Tracking No.: 21/114346

**Date:** 12 November 2021

**From:** Executive Group Manager, Environment, Heritage and Water

**Subject:** Point source pollution policy development and Queanbeyan Sewerage Treatment Plant upgrade

**Critical Date:** 24 November 2021

**Critical Reason:** Information request by Minister's Office

- DDG, Environment, Water and Emissions Reduction 16/11/21

**Recommendation**

That you note the information contained in this brief.

**Noted / Please Discuss**

Shane Rattenbury MLA .....

14/3/22

Minister's Office Feedback

## Background

1. Point source pollution are single, identifiable sources of pollution. Examples include wastewater from sewage treatment plants, drainage from landfill, stormwater run-off and discharge from individual industrial businesses.
2. Identifiable pollution sources are regulated by the *Environment Protection Act 1997*. Environmental Authorisations (licenses to pollute) for point source polluting activities set water quality parameters based on available information when first issued, but these parameters are generally not reviewed thereafter.
3. The Queanbeyan Sewage Treatment Plant (STP) contributes up to 25% of the soluble nutrient load into Molonglo River and Lake Burley Griffin.
4. The current Queanbeyan-Palerang Regional Council (QPRC) proposal to upgrade the Queanbeyan STP (EIS201900019) has prompted concerns about the increased future pollution load entering the waterway and its effect on the lake's water quality. The Environmental Impact Statement can be found at: [www.planning.act.gov.au/development\\_applications/da\\_assessment/environmental\\_assessment/environmental\\_impact\\_statements/queanbeyan-sewage-treatment-plant-upgrade-in-jerrabomberra](http://www.planning.act.gov.au/development_applications/da_assessment/environmental_assessment/environmental_impact_statements/queanbeyan-sewage-treatment-plant-upgrade-in-jerrabomberra).
5. Planning is underway by Icon Water for infrastructure upgrades to the Lower Molonglo Water Quality Control Centre (LMWQCC) and a potential new east Canberra STP.
6. The ACT Government 'ACT Healthy Waterways' infrastructure initiative aims to reduce other diffuse pollution sources from urban sources that also affect lake water quality.

## Issues

### Broad Policy options

7. The Environment, Planning and Sustainable Development Directorate (EPSDD) has progressed work to examine transformative policy solutions that could redirect planning activities towards innovation in water resource management and effective environmental management. This activity is compatible with priorities under National water reforms, the ACT Water Strategy, ACT legislation and the Territory Plan.
8. The viability, effectiveness and impacts of a range of potential point source pollution policy options have been analysed, with cross-agency collaboration, to consider the ACT Wellbeing Framework, ACTIA risk assessment and triple bottom line criteria.
9. The following themes emerged as priority areas for policy development:
  - a. **'Futureproof'** – promoting higher standards for new development by compelling use of best practice technology in infrastructure design and use of best available science for assessing impacts and supporting regulation;
  - b. **'Reduce'** – providing incentives for industry to pollute less (e.g. financial reward) and reviewing policy for beneficial re-use of treated wastewater; and
  - c. **'Remove'** – applying a risk-based framework to support high-cost infrastructure solutions that remove wastewater from high profile community areas. This option stands to yield the largest tangible reductions of point source pollution to Lake Burley Griffin.

Options related to the Queanbeyan STP

*Futureproof*

10. EPSDD is contributing to the Territory Plan review. Future development proposals will be compelled to demonstrate how best practice technology informs design and best available science informs impact analysis of the downstream aquatic environment.
11. EPSDD has commissioned new modelling and analysis to recalibrate the information used for impact assessment and the setting of development conditions to incorporate emerging science.
12. Utilising the new model and analysis conducted by EPSDD, new development conditions could be supported on the basis that:
  - a. the modelled operation of the proposed infrastructure would not result in the deterioration of environmental and amenity values (water quality-related) under climate change scenarios compared to the current standards for permitted use; and
  - b. monitoring requirements for demonstrating compliance and validating the development conditions are reviewed to support effective regulatory oversight of the new operating regime.
13. A review of STP environmental regulatory provisions, in line with National Water Quality Guidelines, could provide additional regulatory assurance. There are limitations with this approach because essential services like STPs can't be 'switched off' if compliance requirements become too onerous or too cost-prohibitive to comply with.

*Reduce*

14. Improved performance of STP operations could be incentivized through better utilising existing accountability mechanisms for sewage utilities. QPRC (and Icon Water) is required to report performance under state and territory environmental regulations and National Performance Reporting established under the National Water Initiative. Information reported against key accountability indicators could be made more publicly accessible through an ACT web-based water information platform.
15. Financial incentives to encourage optimal STP operation can be explored that uses the revenue from the Water Abstraction Charge (WAC). The WAC has been levied to recover the cost of water and catchment management. Options to incentivise a change in operation that reduces the cost of managing for environmental impacts may include:
  - a. A performance incentive that reward (e.g. fee waivers) an STP operator for reducing its impact on water quality.
  - b. WAC innovation grants could encourage uptake of best practice STP operations.
16. Alternatives to reduce the volume of treated wastewater discharged to waterways can be supported by policy. Subject to further investigation, policy may describe purification requirements and support the use of beneficial off-site applications, for example, dust suppression of construction sites, controlled irrigation, demonstration fibre crop plots, etc. The cost effectiveness could be improved with 'Removal' options below.

### *Removal*

17. Further investigations can be made into the feasibility of connecting the Queanbeyan STP, Fyshwick STP and the LMWQCC through a piping system allowing raw sewage or treated wastewater to bypass Lake Burley Griffin. This would potentially be more cost effectively managed at a single, upgraded wastewater treatment facility at LMWQCC. This could also build on the imminent need to upgrade the Fyshwick STP and/or inform exploration of new treatment plants.
18. Cost-benefit analysis of managing a singular wastewater treatment facility at LMWQCC could be undertaken to inform strategic sewage master plans beyond 2040.

### **Broad Policy timeframes**

19. The 'Futureproof' policy option requiring amendment of the Territory Plan is expected to occur over the next 18 months with the ACT Planning System Review and Reform.
20. Review of environmental licensing regulatory framework may take six months.
21. A pricing mechanism to incentivize improvement in operating performance requires further development but if prioritized could be developed within 12 months.
22. The 'Reduce' policy option requires approximately 6 months to establish a cross-Directorate policy direction with EPSDD, ACT Health and the Chief Minister, Treasury and Economic Development Directorate (CMTEDD). A treated wastewater re-use policy could potentially be tabled in the Spring 2022 sitting of the Legislative Assembly. Alternatively, best practice guidelines could be published by EPSDD by July 2022.
23. Re-use of treated wastewater is intended for canvassing in a future Integrated water management plan - securing water supply for the ACT and Region and is under consideration as a water supply option in Icon Water's draft Drought Management Plan.
24. The 'Remove' policy option requires significant conceptual infrastructure planning in line with strategic objectives of ACT sewage and water security masterplans.
  - a. Collaboration is required across EPSDD, CMTEDD, Transport Canberra and City Services Directorate (TCCS) and external utility operators Icon Water and QPRC.
  - b. Modelling of scenarios to provide clarity on cost-benefits may take six to 12 months and an additional 12 to 18 months would be required for procurement of professional services to develop concept designs.

### **Financial Implications**

25. 'Futureproof' and 'Reduce' policy options could be met within the EPSDD budget; however, would require reprioritisation of staff resources.
26. Infrastructure planning, cost-benefit modelling, conceptual planning, detailed design, approval process and infrastructure delivery cannot be resourced within the current budget and requires consideration of the responsibility for strategic planning.

### **Consultation**

#### **Internal and Cross Directorate**

27. Internal consultation is underway involving EPSDD, CMTEDD, ACT Health and TCCS to inform policy, sensitivities, limitations and future implementation considerations.

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Additional consultation is planned for Treasury and the Justice and Community Safety Directorate inputs.

### External

28. Initial contact has been made with Icon Water to introduce general policy aspirations.
29. Consultation has not yet occurred with QPRC. However, this is intended to occur through the ACT and Region Catchment Management Coordination Group.

### **Work Health and Safety**

30. There are no work health and safety implications associated with this brief.

### **Benefits/Sensitivities**

#### *Queanbeyan-Palerang Regional Council*

31. Consultation with QPRC will be conducted in a manner that clearly maintains separation from statutory planning processes already underway for EIS2001900019 under the *Planning and Development Act 2007*.
32. QPRC is likely to be sensitive to and objectionable to policy development and subsequent development conditions occurring after QPRC initiated the proposed upgrade to Queanbeyan STP.

#### *Commissioner for Sustainability and the Environment*

33. The Commissioner for Sustainability and the Environment is due to complete the State of the Canberra Lakes report in February 2022. The policy position on managing point source pollution may form part of the Directorate's management response to recommendations contained within the Commissioner's report.

### **Communications, media and engagement implications**

34. Media interest is not expected at this point in time.

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