



Your ref  
Our ref  
Enquiries

Mr Nick Turner  
Strategy Manager, Water Recycling  
Water Corporation  
629 Newcastle Street  
LEEDERVILLE WA 6007

Dear Nick

### DEPARTMENT OF HEALTH (DOH) POSITION ON GROUNDWATER REPLENISHMENT TRIAL

Thank you for advising that Water Corporation view groundwater replenishment using highly treated recycled wastewater as a significant potential future drinking water source for Perth, and that the Water Corporation is planning a trial of the approach at Beenyp Wastewater Treatment Plant.

I understand that the Water Corporation is referring the Trial to the Environmental Protection Authority (EPA) for determination whether it requires assessment under Section 38 of the *Environmental Protection Act (1986)*.

The purpose of this letter is to provide the EPA with the current DOH position regarding the proposed Trial, and for this letter to form part of the Water Corporation's S38 referral.

The DOH has been assessing the health issues associated with groundwater replenishment as a potential future drinking water source for some time, through a number of initiatives including:

- The provision of a policy statement on health issues and regulation to Section 16 advice to the Minister for Environment on the approach — *Strategic Advice on Managed Aquifer Recharge using Treated Wastewater on the Swan Coastal Plain, EPA Bulletin 1199, October 2005*.
- Membership of a national working group and contributing to the drafting of *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2) Augmentation of Drinking Water Supplies*. This has been a key reference in assessing the risks of undertaking the Trial, and will be a key input determining future state guidelines for groundwater replenishment if the Trial confirms the approach is safe.

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- Acting as lead agency and Project Director for a research project *Characterising Treated Wastewater For Drinking Purposes Following Reverse Osmosis Treatment*, funded by the Premiers Collaborative Research Fund. The project is identifying the key micropollutants in Perth's treated wastewater needing to be monitored and managed, and the effectiveness of high technology treatment processes to remove them. This project will ensure that any recycled water schemes developed will not pose a risk to human health. It has been used to inform on risk assessment and design of the Trial, and will be a key benchmark in assessing the operation of the Trial.
- Contributing to the Water Corporations Communications strategy on the concept of groundwater replenishment and the Trial, and in particular specification of key health regulation and protection messages.
- Briefing key health stakeholders on the concept of groundwater replenishment, the Trial, and the Departments perspective on the approach, including the Australian Medical Association, Public Health Association, and the Health Consumers Council.
- Reviewing the Water Corporations Risk Assessment Report for the Trial. The DOH agrees with the conclusions that the risks to public health of undertaking the Trial are low, but notes that the Water Corporation will still need approval from the DOH prior to commencing injection.

The DOH is also a signatory to an Interagency Agreement on the Trial, and a member of the working group formed to deliver on commitments made in the agreement. As a member of the working group, the DOH has provided direction on the risk assessment process to be carried out for the Trial, the water quality guidelines that will apply prior to injection of the treated water and, the specific health issues the Trial must address.

The DOH will monitor performance during the operation of the Trial through the working group to ensure DOH requirements are being met, and that the necessary knowledge is being gained to address the identified issues.

The DOH requirements for approval to commence injection will include validation of pathogen reduction for at least two months prior to commencing injection and confirmation that required chemical testing will be undertaken during the Trial period.


In summary, the DOH:

- has been consulted in defining the scope, location and objectives of the Trial;
- has provided direction regarding risk management frameworks that will be adopted, including the risk assessment process, and are satisfied that the Water Corporation have complied with this direction;
- is satisfied that the appropriate stakeholder consultation has taken place and will continue to occur during the Trial;
- has reviewed the risk assessment report produced by Water Corporation for the Trial, and determined that the risk to public health will be low; and,
- has an approvals process in place that the Water Corporation must comply with.

A key objective of the Trial is to provide the information required by the DOH to assess health aspects for any future large groundwater replenishment schemes and thus the DOH is keen to see the Trial commence as soon as possible.

Please note that the undersigned is the nominated formal contact for enquiries regarding the Water Corporations S38 referral, and should be contacted for any DOH response relating to the proposal.

Yours sincerely



Associate Professor Paul Van Buynder  
**DIRECTOR**  
**COMMUNICABLE DISEASE CONTROL DIRECTORATE**

17 March 2008

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Mr Nick Turner  
Strategy Manager, Water Recycling  
Planning and Infrastructure Division  
Water Corporation  
629 Newcastle Street  
LEEDERVILLE WA 6007

Dear Mr Turner

***Water Corporation Groundwater Replenishment Trial***

The Water Corporation have highlighted that groundwater replenishment using highly treated recycled wastewater represents a significant potential future drinking water source for Perth. To further investigate this, the Water Corporation is proposing a trial of the approach at the Beenyp Wastewater Treatment Plant (the Trial).

The Department understands that the Water Corporation intends to refer the Trial to the Environmental Protection Authority (EPA) for determination of whether it requires assessment under Section 38 of the *Environmental Protection Act 1986*. The purpose of this letter is to confirm the position of the Department regarding the Trial, and for this letter to form part of the Water Corporation's referral.

The Department has been involved in assessing the water resource and environmental issues associated with groundwater replenishment for a number of years, through a range of initiatives (Table 1, attached). The Department's key responsibility with regard to the Trial is to ensure that the relevant environmental values are maintained. This includes protection of the Gngangara Mound to ensure its current and future drinking water value is maintained.

The Department's key involvement has been as principal author and signatory to an Inter Agency Agreement for the Trial, and as Chair of the Working Group formed by the Agreement. The Department will have an ongoing role in the operation of the Trial through this Working Group, to ensure that the Department's requirements continue to be met.

The Department has been consulted in defining the scope and objectives of the Trial, and has provided direction regarding the risk management framework and assessment process that are being applied. The Department has reviewed the Water Corporation's risk assessment for the Trial, and considers that the process applied meets the Department's requirements. Risks will continue to be assessed through the design, construction and commissioning process, and injection will not commence without Department of Health approval and confirmation that the risks are low.

Further, the Department is satisfied that the appropriate stakeholder consultation has taken place to date, and understands that appropriate consultation will continue to occur during the Trial.

On this basis, it is the Department's opinion that, with regard to environmental and water resource management issues, the EPA's requirements (EPA letter 20 October 2006) to allow a Level of Assessment of 'Not Assessed' have been met.

Please note that the undersigned is the nominated Departmental contact for enquiries regarding the above aspects of the referral, and should be contacted for any Department of Water response relating to the proposal.

Yours sincerely



Rob Hammond  
Director  
Water Resource Use

13 March 2008

**Table 1.** Department of Water involvement related to the Groundwater Replenishment Trial

<p>Memorandum of Understanding – Department of Environment and Conservation</p>	<p>A memorandum of understanding between the Department of Water and Department of Environment and Conservation was signed regarding the Trial and associated projects. This agreed that Department of Water will take the lead in developing guidelines for environmental risk assessment of managed aquifer recharge, with advice provided by DEC as necessary</p>
<p>Premiers Collaborative Research Project <i>Characterising Treated Wastewater For Drinking Purposes Following Reverse Osmosis Treatment</i></p>	<p>The Department is a partner to this project. The project is determining the key micropollutants in Perth’s treated wastewater which need to be monitored and managed, and the effectiveness of high technology treatment processes (pilot scale reverse osmosis treatment) to remove them.</p>
<p>Raising National Water Standards project <i>Development of an Ecotoxicity Toolbox to Evaluate Water Quality for Recycling</i></p>	<p>The Department is project manager. This aims to develop a toolbox of ecotoxicity tests that can be used to assess and ensure the environmental safety of water intended for recycling or discharge into the environment. Product water from the pilot plant from the project described above is one of the discharges that will be assessed by the project.</p>
<p>Water Corporation’s Communications Strategy</p>	<p>The Department contributed to the Water Corporation’s Communications Strategy on the concept of groundwater replenishment and the Trial, and in particular, specified messages relating to water resources.</p>
<p>Water Corporation’s Risk Assessment</p>	<p>The Department considers that the process applied for the risk assessment is rigorous and aligns with National and State guidelines. The Water Corporation have demonstrated that the risks to water resources, drinking water quality and the environment of undertaking the Trial are likely to be low. Notwithstanding this, the Department notes that risks will be continue to be assessed through the design, construction and commissioning process, and that injection will not commence without confirmation that the risks are low. The Department has also proposed ongoing processes to ensure continued protection of the relevant environmental values.</p>
<p>Inter Agency Agreement for the Trial</p>	<p>The Department’s key involvement has been as principal author and signatory to an Inter Agency Agreement for the Trial, and Chair of the Working Group formed by the Agreement. As a member of the Working Group, the Department has provided direction on:</p> <ul style="list-style-type: none"> <li>• the risk assessment process to be carried out for the Trial;</li> <li>• relevant water quality guidelines; and</li> <li>• the specific issues the Trial must address, and</li> <li>• success criteria relating to these issues.</li> </ul>