

Review of EPA Guidelines for the Use of Recycled Water

Overview

Since early 2019 the Department of Environment, Land, Water and Planning (DELWP) has been leading a whole of government review and update of Victoria's recycled water guidance.

The most widely used recycled water guidelines are being reviewed and have been consolidated and updated. The proposed *Victorian Guideline for Water Recycling and Technical Information for the Victorian Guideline for Water Recycling* were developed by a joint industry and government working group comprising representatives from DELWP, the Environment Protection Authority (EPA), Department of Health and Human Services (DHHS), VicWater and Yarra Valley Water.

Drivers for the review and update of the guidelines

The purpose of the review is to facilitate the government's objective of supporting the increased uptake of diverse, safe and suitable water sources to improve water security and the resilience and liveability of our cities and towns.

The review supports an identified action within the Victorian Government's strategic water policy, [Water for Victoria](#): to "clarify and improve the regulatory arrangements for recycled water and stormwater" (Water for Victoria, action 5.1).

While the existing guidelines have served us well, key stakeholders including scheme proponents, recycled water users and regulators called for changes, on the basis that current guidelines:

- Are outdated (some are approaching 20 years old)
- Are at times unclear and contradict one another
- Don't provide an agreed risk-based framework for assessing all end uses
- Specify roles for multiple regulatory agencies but lack clear accountabilities and referral processes to manage approvals and common issues
- Discourage a contemporary risk management approach by scheme proponents.

The rationale for changing and updating the guidelines is to respond to this feedback and to facilitate safe and sustainable water recycling across the state to help improve environmental outcomes and water security.

The guidelines are being reviewed in phases, as part of a continual improvement process. This first phase focuses on simplifying, streamlining, clarifying and accelerating approvals processes, and makes relatively minor updates to the technical and scientific aspects of the existing guidelines.

Recycled water guidelines that were reviewed and revised

Five existing guidelines have been consolidated into one guideline and one technical information document. Specifically, the following four existing EPA guidelines and one DHHS guideline were reviewed, updated and are proposed to be replaced with the new consolidated guideline and a technical information document:

- EPA Publication 464.2 (2003): Guidelines for Environmental Management: Use of Reclaimed Water, including Addendum to Class A Information in 464.2.

- EPA Publication 1015.1 (2005): Guidelines for Environmental Management: Dual Pipe Water Recycling Schemes – Health and Environmental Risk Management, including Addendum to 1015.1 (2015).
- EPA Publication 887.1 (2006): Supply of Reclaimed Water for Drought Relief.
- EPA Publication IWRG632.1 (2017): Industrial Water Reuse.
- DHHS Guide for the completion of a Recycled Water Quality Management Plan for Class A water recycling schemes (DHS 2008).

The new proposed guideline and technical information document cross-reference and draw from existing information sheets and guidance including the following:

- Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (phase 1)
- [Guidelines for validating treatment processes for pathogen reduction \(Supporting Class A recycled water schemes in Victoria\)](#) (DHHS, 2013).
- [VBA Technical Solution Sheet 91.04 Grey or Recycled Water](#).
- [Victorian Building Authority \(VBA\) Technical Solution Sheet 91.02 Recycled Water \(Non-Drinking Water Supply\)](#).

Scope of recycled water schemes covered in the revised draft guideline

The proposed guideline and technical information document cover schemes exceeding the threshold in the *Environment Protection (Scheduled Premises) Regulations 2017* of 5,000 L/day design capacity or actual flow rate, including:

- Recycled water schemes i.e. schemes which recycle water derived from sewage.
- Industrial wastewater effluent schemes, i.e. schemes which recycle water produced from processes at industrial or commercial premises, including all waterborne waste from these facilities except sewage and prescribed industrial waste.
- Sewer mining schemes / third party access schemes, being systems/activities, which generally extract and recycle wastewater from the sewer network.
- Recycled water / industrial wastewater effluent schemes which blend or 'shandy' alternative water sources (e.g. channel water or stormwater).

Reuse schemes, that are not scheduled premises, are out of scope, such as:

- 'Closed loop' schemes (no discharge to environment).
- Small onsite domestic systems (<5,000 L/day).
- Prescribed industrial waste.
- Stormwater schemes (unless blended as described above).

Summary of changes

The proposed new guideline and technical information document contain five key logically grouped areas of change:

- Efficient and proportional regulatory approval processes with clear accountabilities including clearer explanation of the onus of responsibility and liability on scheme proponents and managers
- Simplified content for applications for wastewater reuse scheme approvals
- Collated and clarified guidance on harm reduction (human health and the environment);
- Simplified and clearer reporting and auditing requirements; and

- Transfer of DHHS's endorsement role for Class A schemes (Recycled Water Quality Management Plan RWQMP) as described in EPA Publications 464.2 and 1015.1 to EPA.

Numerous miscellaneous changes and updates have also been made to achieve the objectives of the review. A summary of the requests from stakeholders, and the resulting changes made in response to those requests, is appended in

. In addition to the tabular summary, several broader overarching goals were identified that are relevant across all aspects of the guidance.

One overarching goal was to consolidate existing suite of guidelines into a single, coherent guideline. Consolidating the existing body of guidance in one guideline, drawing together multiple requirements that sit across various agencies, will provide simpler, clearer and more efficient guidance to recycled water stakeholders.

Another overarching goal was to look for benefits from having more tailored processes in place for application, assessment, approval and ongoing management and audit for different scheme types. For instance, potentially higher-risk schemes will require different processes from lower-risk schemes. Schemes operated by proponents with a good compliance history and robust quality systems will have different requirements from schemes operated by entities with a poor compliance history or lacking robust quality systems.

Next steps and commencement of the proposed guideline

Feedback received through the public consultation process will be reviewed. Consideration will be given to suggestions to improve the proposed guideline and technical information. EPA is expecting to finalise and publish both documents by December 2020.

The guideline and technical information document will come into effect immediately upon publication and must be used in assessing new schemes and amendments to existing schemes. Existing approved EIP/HEMPs will remain valid unless the proponent makes significant changes to the scheme and seeks reapproval, or until the EPA requires reapproval of the scheme under the new guidelines. Whether the changes are considered significant will be assessed on a case by case basis. Reuse applications, currently with EPA or submitted prior to the publication of new guidelines for assessment and approval, will be assessed under existing guidelines.

The *Environment Protection Amendment Act 2018* ("EP Act 2018") is scheduled to commence on 1 July 2021. Until then EPA will continue to regulate reuse schemes under the *Environment Protection Act 1970*, including all existing subordinate legislation (regulations and statutory policies including scheduled premises regulations, state environment protection policies and waste management policies). From 1 July 2021, the guideline and technical information will form 'state of knowledge' for wastewater reuse scheme activities and will be updated to reflect the regulatory regime under the EP Act 2018.

Have your say

We welcome your feedback on the proposed guideline and technical information document, which can be found on the Engage Victoria website at www.engage.vic.gov.au/rw-guideline-review. Further information on how to make a submission can be found on the Engage Victoria website.

Table 1. Requests from stakeholders and resulting changes made in response summarised in four logical groups.

Improvement opportunity and goal	Stakeholder perceptions and requests	Proposed improvements in the revised guideline
<p>Efficient and proportional regulatory approval processes for recycled water schemes with clear accountabilities for all stakeholders.</p>	<p>Elements of the current approval and referral process can be more efficient.</p> <p>Roles and responsibilities are unclear in certain areas and need to be better defined.</p> <p>Due to delays in the approval process, scheme proponents are seeking certainty in relation to timeframes for regulators to respond to requests for endorsement and re-endorsement of schemes and associated risk management plans.</p> <p>Beyond initial approval of a scheme, ongoing reviews and approvals are not clearly defined.</p>	<p>A revised approval process whereby EPA is the one lead approving authority. This will include the role of endorsing Class A recycled water schemes, which was previously fulfilled by DHHS.</p> <p>Clarified roles and accountabilities for all stakeholders. This includes recycled water scheme proponents, managers, suppliers, users and government agencies. In particular, EPA's role now encompasses the endorsement of Class A recycled water schemes.</p> <p>A streamlined approval process, including shorter approval timeframes for well-presented, compliant applications.</p> <p>Clear instructions to assist scheme proponents submit compliant and good quality submissions to avoid delays in assessment and approval.</p> <p>Clearly defined scheme review and re-approval triggers to help with ongoing planning.</p>
<p>Clarity around the content of the application for recycled water reuse schemes approval</p>	<p>Applications may not be adequately addressing key issues and risks.</p> <p>Requirements need to reflect key issues and risks.</p> <p>Guidance has to be sufficiently simple and consistent as to be practical for recycled water regulators, scheme managers, users, operators, proponents and other stakeholders.</p>	<p>Clearly defined mandatory information to be included in applications to demonstrate that risks to public health and the environment are reduced so far as is reasonably practicable.</p> <p>Instructions on issues and risks that need to be considered in applications.</p> <p>Simpler and clearer content requirements for scheme approval applications.</p>

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<p>Harm reduction - Human health and the environment</p>	<p>Recycled water schemes should be optimised to achieve health and environmental objectives efficiently and effectively. Overly simplified and conservative guidance can lead to 'over-engineering' and excessive cost; whilst guidance that is not sufficiently protective can lead to adverse health or environmental consequences.</p>	<p>Updated and tailored risk assessment processes to help determine fit-for-purpose recycled water quality, including both microbiological and chemical quality. This is intended to improve the balance between potentially complex risk-based scheme-by-scheme assessments on the one hand, and overly simplistic and inefficient approaches on the other hand.</p> <p>Clearer guidance on how recycled water schemes can be developed and operated to reduce public health and environmental risks so far as is reasonably practicable.</p> <p>Updated guidance on the classes of recycled water and minimum recycled water quality required for specific known uses of water with or without withholding periods and other commonly applied controls.</p> <p>An expanded range of recycled water treatment processes are covered in the guidelines.</p> <p>Further guidance on plumbing controls, with a particular emphasis on avoiding cross-connections. For example, requirements relating to plumbing installations, inspections, auditing and higher-risk scenarios, such as schools, have been provided.</p> <p>Whilst the focus of the update was on the application and approval process, rather than the technical aspects of the guidelines, some updates have been made to draw upon recent scientific evidence relating to risk, as well as emerging technologies and approaches that can be used to assess risk and to routinely monitor and manage recycled water schemes to mitigate risk.</p> <p>Relevant aspects of the Australian Guidelines for Water Recycling (AGWR) have been drawn on in relation to developing a risk assessment to determine fit-for-purpose recycled water quality and risk management processes.</p> <p>A clearer structure aligned with the AGWR framework. This approach is similar to the framework used for drinking water and will move Victoria towards having a more consistent risk management approach across the water cycle.</p> <p>All Class A, B & C reuse schemes are now required to prepare and seek approval of a Health and Environmental Management Plan (HEMP) instead of an Environment Improvement Plan (EIP). There are two components to a HEMP: 1. Human Health Management Plan (HMP) and 2. Environmental Management Plan (EMP). Class A reuse schemes require a Recycled Water Quality Management Plan (RWQMP) and irrigation schemes require a Land Capability Assessment (LCA).</p> <p>Introduction of the use of Environmental Control Points, to better reflect and highlight controls on environmental risks.</p> <p>Updated guidance on Critical Control Points to clarify the management of health risks.</p> <p>Consideration within the guideline of novel and emerging recycling activities, such as the use of recycled water for industrial, firefighting and agricultural/horticultural activities, which will broaden the range and nature of recycled water uses explicitly discussed or supported within the guideline.</p>

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<p>Simplifying reporting and fostering continuous improvement by establishing clear guidance on what and why to report and audit and provide a pathway for regulators and proponents to use this data in future planning and management decisions</p>	<p>Requirements relating to reporting, assessment of reporting and auditing arrangements need to be reviewed to ensure they meet EPA and DHHS requirements.</p>	<p>Better defined reporting requirements for scheme proponents and managers, including requirements for preparing and submitting annual performance reports.</p> <p>Streamlined and clarified assessment processes for reports received by EPA, including regular review of approvals to update with the latest technology and practices.</p> <p>Simplified and clearer auditing arrangements for schemes (e.g. frequency, timing and other relevant requirements), and tailored arrangement based on complexity and the level of risks to public health and the environment.</p> <p>Simplified process for ongoing management, reporting and compliance auditing of recycled water schemes, including accepting attestations from third-party audits to reduce duplication.</p>