



25/02/22

Dear Concerned Waterways Alliance Member,

Thank you for all your hard work and commitment looking after the health of Victoria's waterways.

We are reaching out to you in the hope that we can have a conversation regarding your response to the state government's Central and Gippsland Region Sustainable Water Strategy<sup>i</sup>.

Your submission on recycled water (Item 11) does not advocate for recycled water to be considered for potable purposes. Coupled with your call (item 12) for desalination to be adopted as a "base-load water supply" and for establishment of second desalination plant to be investigated, your submission, if it remains unchanged, may result in unintended and unnecessary environmental, economic and cultural damage to both our rivers and our oceans.

We are extremely concerned that your submission will become a de facto green light for a future Victorian government to push ahead with more desalination plants without properly considering economically and environmentally responsible alternatives such as purified recycled water. This has already been reported as such in the Sentinel-Times (6 Jan 2022)<sup>ii</sup>.

Our position mirrors many water experts and decision makers who have privately expressed concerns with us and are at a loss to explain the direction current Victorian water policy is taking, by excluding even the possibility of an evidenced-based assessment of purified recycled water.

Integration of purified recycled water would provide Victoria with a once in a generation opportunity to safely, economically and efficiently, "drought proof" urban water supplies and reduce ocean and riverine pollution caused by wastewater treatment plants. It would also minimise energy costs in contrast to seawater desalination.

We urge you to consider addressing this omission in your initial submission and advocate that purified recycled water, based on its merits, be included in the Victorian water strategy.



We would welcome the opportunity to further discuss our findings and how we might work together to resolve our concerns.

Yours faithfully,

A handwritten signature in black ink, appearing to read "John Gemmill". The signature is fluid and cursive, with a long horizontal stroke at the bottom.

John Gemmill  
CEO Clean Ocean Foundation  
0409 425 133

A handwritten signature in blue ink, appearing to read "Pete Smith". The signature is more stylized and less legible than the one on the left.

Pete Smith  
President Clean Ocean Foundation  
0417 337 717



## Background

Clean Ocean Foundation (COF) is an environmental charity that has a focus on reducing ocean pollution. One of our key aims is to reduce the massive ongoing problem of aquatic pollution related to the dumping of partially treated wastewater from both industrial and domestic outfalls into Australia's coastlines and rivers.

For the last six years, we have conducted basic research on the problem of outfalls and in conjunction with the Marine Biodiversity HUB have created a freely accessible National Outfall Database that details discharges from all of Australia's 194 coastal outfalls including Victoria's 19 coastal outfalls<sup>iii</sup>. COF has also begun preliminary research into riverine outfalls (214 inland discharges in NSW)<sup>iv</sup> as part of the federally funded Emerging Priorities Project<sup>v</sup>.

Through this collaborative project with water authorities and scientific experts we have accumulated a unique and informed perspective on the water cycle, the impacts of ocean outfall discharges and opportunities for both financial and environmental benefits from the integration of purified recycled water into any future water strategy<sup>viii</sup>.

Using the same technology as seawater desalination, purified recycled water is just as safe, but requires substantially less energy and is cheaper to produce. It reduces the quantity of wastewater discharged to our aquatic environments from existing wastewater treatment plants and eliminates the need to manage the effluent and environmental impacts from future desalination plants.<sup>viii</sup> This creates an overall positive impact on our riverine and oceanic environments.

As a result of this research, we are certain that before any further expansion of seawater desalination capacity takes place, equal consideration must be given to first upgrading wastewater treatment plants to produce purified recycled water to secure Victoria's water supplies.

Note that purified recycled water is already used in over 35 progressive cities around the world with high levels of acceptance and safety, including in Perth, where twenty percent of the water supply comes from purified recycled water.

Potable water recycling can also have a significant impact on droughtproofing an urban environment due to the multiplier effect. For example, if eighty percent of urban water usage is recaptured and recycled, one litre of water is effectively equivalent to five litres of "new water"<sup>ix</sup> – effectively creating the opportunity for a truly circular economy in the water sector.



Research has shown that successful adoption and acceptance of purified recycled water requires communities be engaged in a gradual evidenced-based dialogue, that includes consideration of the benefits and trade-offs related to recycling water.<sup>x</sup>

Clean Ocean Foundation's own long experience with various community groups, including participating in South East Water's community panel in 2021, mirrors these findings and we are committed to supporting the establishment of a such a truly collaborative process to properly assess the integration of purified water into Victoria's water strategy.

Victoria also possesses a unique opportunity to produce purified recycle water at a fraction of the normal cost from its Eastern Treatment Plant. Currently over 160 gigalitres a year of Class A+ water fresh water is wasted by being dumped into the ocean near Gunnamatta beach<sup>xi</sup>. It's continued discharge has also been implicated in the devastation of the bull kelp forests near the outfall<sup>xii</sup>. This water would require only minimum treatment to create purified recycled water. It could supply close to the same amount of potable water into the Melbourne's water supply as the Victorian Desalination Plant can at maximum capacity, but for a fraction of the cost.

Put simply there is no good evidenced-based reason why purified recycled water should not be assessed, on its merits, as part of the Victoria's Central and Gippsland Region Sustainable Water Strategy.

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<sup>i</sup> <https://www.envirojustice.org.au/wp-content/uploads/2021/08/Joint-Statement-to-the-Central-and-Gippsland-SWS-July-2021.pdf>

<sup>ii</sup> <https://sgst.com.au/2022/01/desal-expansion-floated/?fbclid=IwAR0mBYw6DrjuH5n4ReD2bqbhFtZ1q4o6Xu3V-6CLEAN7C03AnsV7obzGWJc>

<sup>iii</sup> <https://www.outfalls.info/>

<sup>iv</sup> <https://www.outfalls.info/docs/Emerging%20Priorities%20Project%20National%20Outfall%20Database%20-%20Final%20Report%202021.pdf>

<sup>v</sup> <https://www.awe.gov.au/science-research/nesp/hub-marine-biodiversity>

<sup>vi</sup> <https://www.cleanocean.org/save-water-save-us.html>

<sup>vii</sup> <https://www.cleanocean.org/2019-upgrading-australias-outfalls.html>

<sup>viii</sup> <https://www.waterra.com.au/publications/document-search/?download=1806>

<sup>ix</sup> <https://www.waterra.com.au/publications/document-search/?download=1806> p27

<sup>x</sup> <https://www.wsaa.asn.au/sites/default/files/publication/download/Research%20stats.pdf>

<sup>xi</sup> <https://www.outfalls.info/detail/locations/50>

<sup>xii</sup> <https://www.frontiersin.org/articles/10.3389/fmars.2020.00074/full>