

EPA Ref: OL00072239

21 April 2022

Mr Phillip Fasham
Manager Water Regulations
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Dear Phillip,

RE: Kyneton WRP Licence amendment application: Licence number – OL00072239 – Addendum to comments sent on 13 April 2022.

On 13 April 2022 EPA provided feedback on your application (submitted 21 March 2022). EPA has now received comments from our Microbiologist, which we would like to add to the comments sent to you on 13 April.

- The comments previously provided on the document titled 'Further information on the Quantitative Microbial Risk Assessment (QMRA) for the discharge of treated wastewater to the Campaspe River', provided by Coliban Water, still stand as they have not been addressed in the application.
- Suggest using the WHO recommended ingestion volume rather than a very limited local study. Normally, recreational water quality objectives are calculated based on 50 exposures per year, which would make the DALY much higher. DALY values should be provided as they were in previous reports.
- Viruses are the main driver of risk in recreational waters impacted by human sources so they should not be eliminated from the QMRA approach.
- Dose-response models for viruses (adenovirus and norovirus) exist and have been published. Please refer to EPA Publication 2007: Quantitative microbial risk assessment for assessing risks to recreational users in Port Phillip Bay (available online).
- There are also some concerns related to the existing irrigation schemes (Racecourse, council parks, Hardwicks, Crofton Park, flood and spray irrigation) reported in Attachment E "Hydrological Assessment and Water Balance Model Report" as Class B (and C?) recycled water is being used in non-restricted areas. Class B should not be used for the irrigation of non-restricted areas unless sub-surface irrigation is used.
- The recycled water classes described in EPA Publication 1910.2 are merely a compliance tool. They cannot replace a risk assessment. It must be noted that the same document stipulates that:
 - Any exceedance to the recommended *E. coli* levels for Class B recycled water (100 *E. coli* /100mL) should trigger resampling and retesting.
 - Levels ≥ 400 *E. coli* /100 mL in two consecutive samples or a rolling annual median ≥ 100 *E. coli* /100 mL should trigger



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a notification of WWTP failure to EPA and investigation to remediate the issue.

This means that the *E. coli* levels proposed for the amended licence (see Attachment F and Permission pathway form) would not be appropriate:

- 100 *E. coli* /100mL should be a rolling median, not an annual median
 - 400 *E. coli* /100 mL should be the maximum level instead of the proposed 500 *E. coli* /100 mL
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- The reported enterococci or *E. coli* levels correspond to levels detected at the point of exposure and, because the water quality at the point of exposure is beyond Coliban Water's control, they cannot be used at the point of discharge as it is not what they are designed for. Focus on excess risks that can attributed to the discharge and using predicted pathogen levels at the discharge point and water flow for the dilution ratio.
 - There is a discrepancy between the *E. coli* levels described in the GHD report and those reported in the RMIT AQUEST reports. These reports indicate that *E. coli* levels in the Campaspe river, upstream and downstream of the Kyneton WWTP varied spatially and temporally, but they were mostly below the SEPP Waters trigger values indicating suitability for primary contact and secondary recreation. The GHD report indicated that levels were above these trigger values, and that the discharge would reduce *E. coli* levels in the Campaspe river.
 - The fact that discharge occurs mostly in winter when recreational activities are rare would be the strongest argument that could be presented as it may eliminate the exposure pathway. It means however that signs should be placed at swimming spots and other areas where beneficial uses may be impacted whenever discharge occurs.

If you have any queries on the above please contact David Robinson at David.Robinson@epa.vic.gov.au.

Yours sincerely



Motla Belville Leshoele
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Cc: