

Information sheet

Biosolids reuse and Covid-19

Waste Reduction and Recycling Act 2011 Environmental Protection Act 1994

The purpose of this information sheet is to provide information for stakeholders regarding the potential for Coronavirus (COVID-19) to be present in Biosolids (sewage sludge), when used in accordance with the End of Waste Code Biosolids (ENEW07359617).

Background

The End of Waste Code Biosolids details the approved uses (including application to land) and conditions for biosolids once they are considered a resource in accordance with the code. The potential for the presence of COVID-19 virus in sewage has been considered.

Potential for COVID-19 to be transmitted by a wastewater system

On 19 March 2020, the [World Health Organization](#) (WHO) provided guidance regarding the potential of COVID-19 to be transmitted via sewerage systems with or without wastewater treatment. Current disinfection methods are expected to be sufficient to manage the COVID-19 virus.

The morphology and chemical structure of COVID-19 virus is very similar to other surrogate human coronaviruses for which there is evidence on both survival in the environment and effective inactivation measures. COVID-19 virus is an enveloped virus, with a fragile outer membrane. Enveloped viruses generally are less stable in the environment and are more susceptible to oxidants (like chlorine).

While recent research in the Netherlands has found that the COVID-19 virus can survive long enough to be detected in sewage treatment plants, as the COVID-19 virus is an enveloped virus it is likely to become inactivated significantly faster than non-enveloped human enteric viruses (such as those with known waterborne transmission e.g., adenovirus, norovirus, rotavirus and Hepatitis A). Therefore management actions for biosolids that already protect against the existing risk from enteric viruses can be expected to also be protective against COVID-19.

The Biosolid stabilisation heating related requirements (those that specify a temperature and duration) for Vector Reduction (for Stabilisation A (Table 4)), within the End of waste code Biosolids (ENEW07359617) would be sufficient to maintain the risk to human health from COVID-19 as low. Likewise, if the requirements for Stabilisation Grade B continue to be used for the 'Restricted uses' in Table 5 of the End of waste code Biosolids (ENEW07359617), there would not be any significant risk from this use.

Likely exposure to persons in the pathway from receipt of the biosolids to treatment and reuse

To date, there have been no reports of faecal-oral transmission of COVID-19. Best practices for protecting the occupational health of workers at sanitation treatment facilities should be followed. No additional precautions are necessary based on current evidence.

Risk from reuse of treated effluent that is being used in accordance with the Queensland recycled water guidelines

In relation to the supply and use of recycled water, additional precautions for COVID-19 are not required, based on current evidence. That is, supplying and using recycled water - in accordance with existing guidance issued

by Queensland Health and the Department of Natural Resources, Mines and Energy - is considered suitably protective of public health.

Approved:

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Version history

Version	Effective date	Comments
1.00	3 April 2020	First publication.

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