

**AUSTRALIAN
WATER**
ASSOCIATION

Australian & New Zealand
Biosolids Partnership



Year in Review
FY2021-22

ANZBP Member Organisations

The Australian & New Zealand Biosolids Partnership (ANZBP) is an Australian Water Association (AWA) Industry Program. It provides a platform to bring together utilities, consultants, academics and government agencies to progress and champion the sustainable management of biosolids.

In FY2021-22 ANZBP had 19 member organisations:



Key Projects

Biosolids Production and End-Use Survey 2021-22



ANZBP's major project for FY22 was the *Biosolids Production and End-Use Survey for Australia and New Zealand*. Based on recommendations from 'ANZBP's 10-year data consolidation project, the survey sought to better understand the use of emerging technologies in biosolids management and end-use in Australia and New Zealand. The Report was released in May 2020 and will now be used to provide insights into biosolids management across Australia and New Zealand.

[View Reports](#)

NB: Reports are available for ANZBP Members via the Member Site

Biosolids Case Study – Quantitative Risk Assessment



Melbourne Water Biosolids Case Study – Quantitative Risk Assessment
August 2021

Biosolids are a dried, nutrient-rich soil-like material that is a by-product of the wastewater treatment process. When solids are separated from wastewater, they go through biological treatment. This reduces pathogens, odours and particles that attract insects and animals.

Following the biological treatment, the solids are then air-dried and stockpiled on site for at least three years to ensure they meet the rigorous standards required by Victorian Environment Protection Authority (EPA) to enable their beneficial reuse. These completely processed solids are then described as 'biosolids'. Across Australia and around the world, biosolids have been used for many years.

Melbourne Water's biosolids are produced from our two wastewater treatment plants, the Western Treatment Plant (WTP) and Eastern Treatment Plant (ETP), which combined treat approximately 90% of Melbourne's wastewater. The biosolids properties qualify them for a range of suitable reuse options, including brood acre farmland application.

Melbourne Water successfully reused over 50,000 dry tonnes of biosolids in 2020/21, which is enough to cover the Melbourne Cricket Ground at a thickness of 2.5m.

In Victoria, the EPA regulates the use of biosolids based on the EPA Publication 943, Guidelines for environmental management: Biosolids land application (EPA 943). These guidelines set clear standards for biosolids land application and require a strict testing regime by water utilities and landholders (farmers).

Being rich in nutrients, micro-nutrients and organic matter, biosolids are a good fertilizer as well as a soil conditioner to enhance the soil and stimulate plant growth. Organic matter such as nitrogen, phosphorus, and micronutrients such as copper, zinc and iron slowly release during plant growth and improve the soil's productivity (McLaughlin et al, 2008). The benefits include improved soil structure, water holding capacity and porosity, in addition to the nutrients.

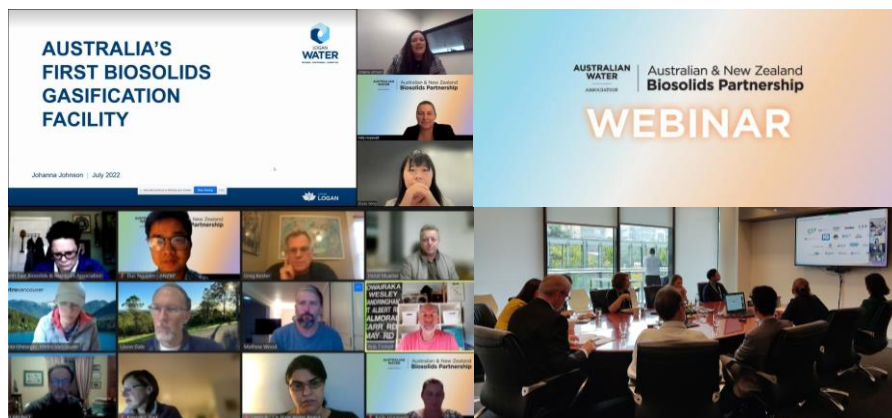
Soil water-holding capacity is the amount of water that a given soil can hold for crop use. When there is a deficit in the amount of water in the soil, the soil profile needs to be replenished by precipitation or irrigation. Improving soil water holding capacity is especially beneficial during drought periods.

In August 2021, ANZBP promoted a Case Study report: *Biosolids Case Study – Quantitative Risk Assessment (QRA)*. Melbourne Water, an ANZBP member, developed the QRA with international peer-review from the Imperial College London. The QRA analyses potential pathways of chemicals/contaminants found within wastewater from the wastewater treatment process to the end-use of biosolids. The QRA provides valuable data to Melbourne Water for biosolids land application.

[View Case Study](#)



Events



Lunch & Learn Sessions

ANZBP designed and delivered four Lunch & Learn sessions, showcasing nine presentations on various biosolids-related topics to more than 200 attendees. The Lunch & Learn series is free for employees of ANZBP member organisations to attend. These sessions have gained a lot of interest from both ANZBP members and the biosolids community, and the series will continue bi-monthly in FY23.

Webinar Series

In March 2022, the [ANZBP Biosolids Webinar Series](#) was held with six presentations across two online sessions. The webinar series showcased critical developments across areas of the water industry and drove discussions, debates and collaboration, which will help set the future direction for these specialisms. The webinar series brought together experts from the Biosolids arena, emphasising problem sharing and solving.

Ozwater Presentation and Members Meeting

At Ozwater'22 in May, ANZBP presented at the Ozwater Theatre to promote ANZBP and drive membership. An ANZBP Members Meeting was also held during Ozwater and was made accessible for all members to join either in-person or online. During the meeting, Kelly Hopewell, Chair of the ANZBP Advisory Committee, provided an update on ANZBP's recent works and presented ANZBP's focus and priorities in FY23. All ANZBP members also had the opportunity to share and provide an update on their work and help shape ANZBP's future directions.



Advocacy and communication

ANZBP Advisory Committee continues to advocate around standards and guidelines affecting biosolids production and use. The Committee look to ensure the sustainable reuse of biosolids, to maximise the beneficial recovery of these resources to keep them in circulation as long as possible, in line with a circular economy approach:

- **Communication**
 - Five ANZBP Newsletters were published in FY22 to keep members updated on biosolids news and regulations, latest biosolids research developments and publications. Research reports in fields such as odour, contaminants and carbon management, case studies, and factsheets were also distributed on the ANZBP website and social media platforms.
- **Regulatory Engagement**
 - ANZBP is working with the Heads of EPAs through the National Chemicals Working Group, providing information that will help inform them of the impact of guidelines and criteria they intend to develop for managing per- and polyfluoroalkyl substances (PFAS) in biosolids through the PFAS National Environmental Management Plan (PFAS NEMP 3.0).
 - ANZBP information is being used by the Australian Government's Department of Climate Change, Energy, the Environment and Water (an ANZBP member) to develop the National Waste Report 2022.
 - ANZBP is represented on the Stakeholder Committee for the NSW Biosolids Guideline Review.
- **Collaborative Relationships**
 - ANZBP has connected with international biosolids colleagues from the California Association of Sanitation Agencies, North East Biosolids & Residual Association (NEBRA) and the European Federation for Agricultural Recycling (EFAR). The Advisory Committee meets virtually with these international organisations quarterly to discuss and collaborate around biosolids challenges, issues, research, policy and regulation in different regions.
 - ANZBP has established a collaborative relationship with the ARC Training Centre for the Transformation of Australia's Biosolids Resource. Through this relationship, ANZBP hopes to support the work of the ARC Training Centre with industry knowledge and data, to ensure their research remains relevant to the industry and enable the research outcomes to be shared among the biosolids community.

