

Purpose of the Biosolids Task Group (BTG)

"To serve as a task group on all biosolids related issues, including (but not limited to) working with government on the development and implementation of biosolids related management frameworks, providing advice to industry on current practices and proposed initiatives, and co-ordinating comments from the water industry."

Key Tasks

- Development and implementation of strategic advice on biosolids management for the Victorian water industry
- Identification and coordination of biosolids research activity in Victoria and input to national biosolids research programs
- Provision of links to the Australia and New Zealand Biosolids Partnership (ANZBP)
- Provision of links with regulators

Task Group Members

- Bruce Hammond (Chair), Goulburn Valley Water
- Aravind Surapaneni, South East Water
- Carly Robertson, Barwon Water
- Doug Gardner, Wannon Water
- Shane Hutchinson, Gippsland Water
- Sri Patnaikuni, Melbourne Water
- Stephen Jones, DSE
- Stephen Lansdell, EPA

From the Chair - Bruce Hammond, Goulburn Valley Water



Welcome to the latest Biosolids Newsletter. As the recently appointed Chair of the Vicwater Biosolids Task Group, I thought it appropriate to reflect on where we've come from over the past few years and what is in store for the Group.

Back in early 2008 a small group of enthusiastic industry representatives, led by Allen Gale as the inaugural Chair, formed the Biosolids Task Group. The Group hit the ground running, taking up and progressing a range of priority issues in the first 12 months.

Achievements included establishing a Victorian industry network, producing the first survey of biosolids production and collating a knowledge hub of related research. Most importantly, the Group influenced the National biosolids agenda and had a strong influence in the formation of the Australian Biosolids Partnership; later to become the ANZBP.

Towards the end of the first 12 months of operation the Task Group established a "Five Key Issues" priority list and set about addressing them. Many industry representatives will be currently appreciating the benefits of these efforts today, which related to:

- Adopting the WERF sustainability template;
- Rationalising regulations and reporting;
- Raising the profile of biosolids management with Government;
- Addressing the risk management aspects of biosolids; and
- Developing communications guidelines and toolkits to assist in consistent engagement with stakeholders and the community.

In addition to addressing these priorities one of the most important roles of the Task Group is to provide

(Continued from page 1)

strategic advice and facilitate knowledge sharing throughout the water industry. Just to name a few achievements, the Group has been instrumental in promoting the 2009 community attitudinal survey, assisting to address spontaneous combustion of

stockpiles, advocating at National forums and providing a number of useful planning and management resources. More recently the Group has influenced the revision of the Essential Services Commission biosolids management performance measure. Where previously water businesses were required to report both dry biosolids and wet sludge, the KPI has been rationalised to reporting dried biosolids in stockpile. This is a significant improvement, particularly for businesses with lagoon based systems.

I take this opportunity to recognise the effort and commitment of our former Task Group Chairs, Allen Gale, Steve Shinnars and Michael Naughton and all of the other participating members who have actively contributed over the years to the many achievements of the Group. They have certainly set a high bar for the Group to follow in the future.

Having largely addressed the "Five Key Issues", it is now time for the Task Group to undertake a strategic planning exercise to set the priorities for the coming years. This will be a key focus in the coming months and will require engagement with the water industry network to identify and prioritise existing and emerging issues. I look forward to being a part of this exciting phase in our operations and providing future reports on progress.

International Environmental Visitor for Gippsland Water

Lynn Peng, a divisional director of China's Hunan province Environmental Protection Bureau visited Gippsland Water's Soils and Organic Recycling Facility (SORF) last week to take a tour of the site and learn more about how Gippsland Water uses best practice technology to treat waste materials from around the state.

The instructional tour of the SORF at Dutson Downs was also attended by three EPA Victoria representatives from Traralgon and Melbourne and was facilitated by Gippsland Water's SORF Senior Process Engineer, Mark Samblebe.



From left: EPA representatives Alice Phung, Lynn Peng, Gary Kay and Angela Shi, are accompanied by Mark Samblebe from Gippsland Water's SORF facility.

(Continued on page 3)

(Continued from page 2)

The group of four were all notably interested in the operation of the SORF facility, which receives a range of waste products from around the state and turns it into useable compost.

The sophisticated level of science and technology behind recycling waste material was of significant interest to the EPA visitors who made particular mention of how the SORF facility focussed on creating the best biological 'recipes' for transforming waste into compost.

Miss Peng, who is visiting Victoria as part of a Memorandum of Understanding (MoU) between EPA Victoria and EPA Hunan Province in China, commented on the benefits of being able to see firsthand the technologies used here in Australia. "I look forward to sharing my learnings with my colleagues upon my return," she said.

Meanwhile Gippsland Water's Managing Director David Mawer said that the SORF facility was a standout environmental facility and continues to contribute to environmental sustainability in the region.

"The SORF facility at Dutson Downs is a growing environmental operation," he said "and we are thrilled that EPA Victoria has chosen this site for a senior international environmental director to visit."

Goulburn Valley Water uses biosolids as a natural alternative to commercial fertiliser

In 2010 Goulburn Valley Water (GVW) applied approximately 6,000 dry tonnes of biosolids to a sheep grazing property neighbouring the Seymour Wastewater Management Facility (WMF) as a soil conditioner to improve pasture growth. At the time GVW largely met the entire cost of the transport and spreading operation.

One year on, improved pasture and soil health benefits of the previous biosolids application are now evident. With a greater appreciation of the value of the product, the neighbour recently approached GVW with the view to acquiring and spreading the 3,000 dry tonnes of biosolids still in stockpile at the WMF.



Photo 2 : Seymour biosolids stockpile

(Continued on page 4)

(Continued from page 3)

After some negotiation the remaining stockpile was spread over a new area of the neighbour's land. The neighbour contributed to the overall costs, to an amount equivalent of what it will cost to commercially fertilise the area. This represented approximately 20% of the total cost. Again approval was obtained from the EPA for the application.

Article by Stuart Harris, GVV



Photo 1: Biosolids spreader at Seymour

ANZBP Update

The Latest from the Australian and New Zealand Biosolids Partnership (ANZBP).

AWA Biosolids Conference

The biennial AWA Biosolids Specialty VI + Source Management Conference, was held 18 - 20 June 2012 on the Gold Coast. The QT Gold Coast proved to be a great venue to hold the conference, and the Queensland weather lived up to expectations.

The conference was opened with a keynote address by Dr. John Novak from Virginia Tech. John has spent more than 40 years studying wastewater sludge dewatering and odours. His address "Recent Findings in Biosolids Research" focused on his research into odours and anaerobic digestion. Odours are a critical issue with regard to land application, and John believes if we can solve the odour problem, much of the opposition to land application will fade.

The dinner after the first day of the conference was held at Sea World, where attendees enjoyed the relaxed atmosphere and were entertained with a stunning display by the dolphins and their trainers.

On Day 2 the Keynote speaker for the Source Management stream was Michael Catchpole, Manager for Trade Waste at Allconnex Water in SE Queensland. His presentation "Wastewater Source Management" focused on the importance of management of the industrial and municipal inputs to treatment plants.

The second Keynote speaker was Bill Barber, Technical Director, Biosolids and Wastewater at AECOM. He gave a presentation on "Viewing Biosolids as a Resource -

(Continued on page 5)

(Continued from page 4)

How biosolids can help Reduce Our Carbon Impact". Bill examined the various treatment and management options for wastewater sludges in terms of their use to yield energy (as biogas) to offset costs which impact water utilities whose carbon emissions at the various Scope 1, Scope 2 and also Scope 3 levels of capture, make them liable to pay the Australian carbon tax (1 July 2012 start date).

In total, there were 54 papers presented by practitioners, researchers, consultants and regulators. Each of the papers provided the attendees with valuable information from people that have obviously taken a great deal of time and care to pass on their learning's through dealing with biosolids issues, both in Australia and around the world.

On the morning of the final day a workshop on "Biosolids Regulation in Australia" was held by the ANZBP. The workshop was extremely well attended by 60 or more delegates, including a number of the regulators from different states. A key challenge for biosolids managers is to operate effectively under a range of regulatory requirements. The group discussed the difficulties presented by the varied regulations, and looked at what opportunities exist to reduce the variation in approach between the states. The ANZBP will take away the outcomes from the workshop and see what can be done at a national level to help overcome some of the inconsistency between states.

Summing up, the conference was a great success, and all of us in the water industry have a great deal to gain from attending the next conference to be held in 2014.

ANZBP Advisory Board Meeting

The day after the conference the ANZBP Advisory Board held its quarterly meeting at the QT Gold Coast in Queensland.

Discussions at the meeting included:

- ANZBP Position Paper – the position paper was finalised and released following the conference.
- The engagement of a part time Communications Manager – the Advisory Board discussed the merits of seeking the services a part time Communications Manager to advise ANZBP on the completion of the ANZBP Communications Plan and how best to promote the sustainable use of biosolids.
- Nancy Penney updated the meeting on the activities of the Water Corporation's research into reducing odour in biosolids product at treatment plants.
- The Arkwood /TWU Arbitration case - recent developments of note in the matter included:
 - A negative finding for Arkwood was handed down by Fair Work Australia.
 - That whilst the finding is negative for the wider industry, and while the potential to impact the broader biosolids industry via increased transport and handling costs may be present, the finding is specific to Arkwood and is not a legal precedent.

(Continued on page 6)

(Continued from page 5)

- Arkwood will consider legal advice on future steps that may be taken.

The Board agreed that once again the issue of clear and shared definitions of biosolids was an important matter and a priority for the ANZBP to address.

- CSIRO Carbon Sequestration Project - Rai Kookana tabled a Carbon Farming Futures Proposal developed by CSIRO, and sought the ANZBP's interest in assisting the project.
- ANZBP Research Updates
 - Biosolids, Carbon & Climate Change Discussion Paper
 - Literature Compendium
 - WERF Trace Organic Chemical Project
 - Industrial Contaminants in Biosolids and Emerging Hazard Identification
 - ANZBP Volumes and Fates of Biosolids (Data Project)
 - Pathogen Presence in Biosolids
 - Volatile Solids Destruction in Lagoons
 - Future research projects, trace organics, industrial contaminants
 - Governance and Board membership
 - KPIs for ANZBP performance
 - ANZBP website

The next meeting of the ANZBP will be held in Cairns in September.

For more information on the ANZBP, any of the projects described above, or to *join as an ANZBP Subscriber* please contact Greg Priest at the Australian Water Association on (02) 9467 8432. Alternatively you can visit www.biosolids.com.au or contact any one of our Victorian colleagues on the ANZBP Advisory Board - Michael Naughton (Barwon Water), Stephen Lansdell (EPA Vic)

ISO – Standardisation of Sludge Recovery, Recycling, Treatment and Disposal

A new field of technical activity has been submitted to ISO by AFNOR (France) on Sludge recovery, recycling, treatment and disposal.

The scope of this proposed area of activity is standardisation of the methods for characterizing, categorising, preparing, treating, recycling and managing sludge and products from urban wastewater collection systems, night soil, storm water handling, water supply treatment plants, wastewater treatment plants for urban and similar

Industrial waters. It includes all sludge that may have similar environmental and/or health

(Continued on page 7)

(Continued from page 6)
impacts.

The scope will also include standardization of measurement methods for characterising and categorising: sampling methods, physical, chemical and microbiological parameters analysis, preparation of sludge, physical behaviour of sludge, all required for the characterisation of sludge with a view to facilitate decisions on the choice of the treatment procedures and of the use and disposal of sludge.

For more information or to provide any comments on this proposal, please contact david.cox@wsaa.asn.au before 28th Sep 2012.

It is likely that the VicWater BTG, ANZBP and WSAA will form a working group to contribute to the project.

If you believe that Australia through Standards Australia should participate in this project and that a representative from WSAA should be nominated to Standards Australia as a candidate please advise David Cox by 28th Sep 2012.

Upcoming ANZBP Events

ANZBP Roadshow - Cairns, 19th September 2012

The ANZBP will be holding another of its successful roadshow events in Cairns, prior to the AWA Northern Queensland Regional Conference in September 2012. Hosted by Cairns Regional Council, presentations will be provided on recent ANZBP research outcomes, as well as updates on local activities and experiences. These events are interactive sessions that encourage discussion and networking and are not limited to presentations and questions.

Carbon Tax and the Water Sector - AWA Workshop

Melbourne: 13 November 2012, Melbourne Exhibition and Convention Centre &
Brisbane: 14 November 2012, Brisbane Convention and Exhibition Centre

Concerned about the carbon tax and the implications and risks your business might face as a result? In partnership with the Australian and New Zealand Biosolids Partnership (ANZBP), we've developed a workshop that will give you a broad understanding of the carbon pricing mechanism in Australia and internationally. Together, we'll explore ANZBP's recently released report Biosolids, Carbon & Climate Change, where we will discuss the strategies businesses in the water industry are adopting to help manage the impacts of the carbon tax. Hear from leading experts from AECOM, University of Queensland's Advanced Water Management Centre and Sydney Water. To see the full program and to register, visit the [AWA Website](#).

Biosolids reuse reporting to the Essential Services Commission

The Essential Services Commission (ESC) is the economic regulator of the Victorian water sector. Water businesses are required to report performance information consistent with the indicators and definitions outlined in the ESC's performance reporting framework. **Biosolids reuse** is one of the performance indicators.

Biosolids Performance Reporting

The 2010/11 Water Performance Report (ESC, 2011) is the ESC's seventh annual report on the performance of the Victorian urban water businesses (available on the ESC web site <http://www.esc.vic.gov.au/water>).

The report incorporates performance indicator data which is provided by Victorian water businesses and independently audited for the 12 months to June 2011. Section 7 (Environmental) of this report provides information on the water businesses' environmental performance. It covers sewage treatment and compliance, effluent recycling, **biosolids reuse** (Section 7.3) and greenhouse gas emissions.

Water business	2006-07	2007-08	2008-09	2009-10	2010-11
Westernport Water	0	0	0	0	170
Barwon Water	217	120	112	55	128
Western Water	143	133	121	121	126
North East Water	0	0	0	279	116
Central Highlands Water	104	91	103	121	115
South East Water	218	100	83	145	111
City West Water	0	100	100	100	100
Coliban Water	39	100	100	100	100
Wannon Water	0	111	76	32	100
East Gippsland Water	0	0	0	0	82
Melbourne Water	0	0	0	3	63
Gippsland Water	100	100	100	100	32
Goulburn Valley Water	115	62	40	205	6
Yarra Valley Water	0	0	251	0	0
GWM Water	0	0	107	134	0
Lower Murray Water	0	0	0	0	0
South Gippsland Water	0	0	0	0	0
Grand Slam Winner	Barwon Water & South East Water	Western Water	Yarra Valley Water	North East Water	Westernport Water

Table 1 "Medal Tally" - Percentage biosolids reused during 2010/11 (ESC web site)

(Continued on page 9)

(Continued from page 8)

The data in Table 1 (on previous page) is compiled by the ESC and allows comparisons to be made between water businesses, thereby facilitating healthy competition by comparison.

A four year average of reuse is provided in Figure 1 along with the 2010/11 year's reuse as a percentage of 2010/11 year's **biosolids production**.

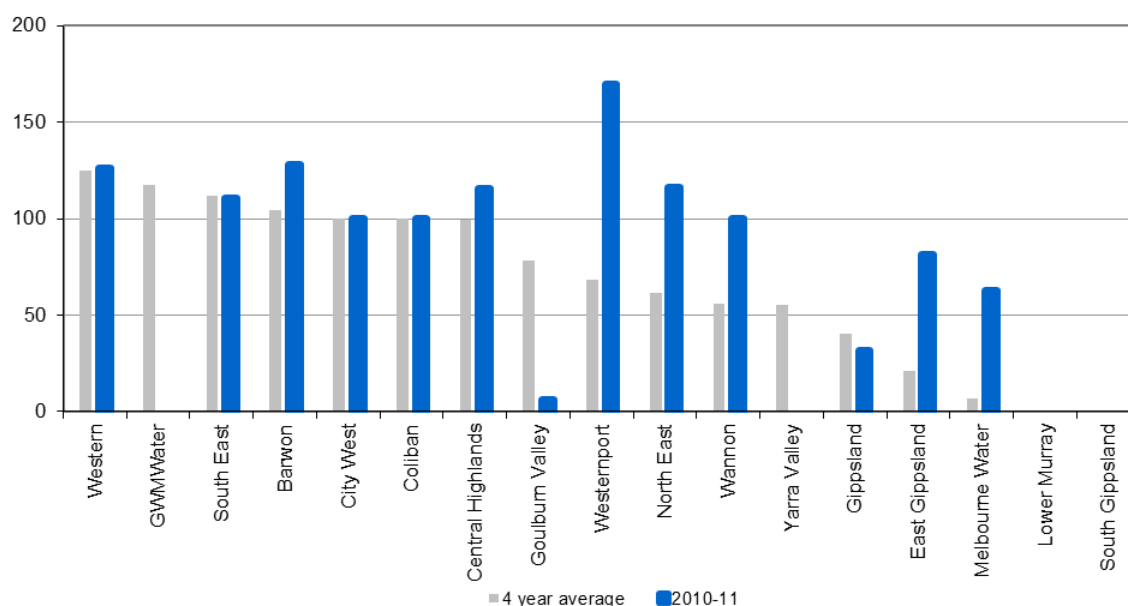


Figure 1 Proportion of biosolids reused (percent) during 2010/11 (ESC web site)

Sludge or Biosolids?

To calculate the percentage of biosolids reuse, water businesses need to quantify the **biosolids production** data as well as the **biosolids reuse** data. Until recently, there were no clear definitions or consistent reporting methodologies across water businesses for these parameters. Furthermore, the terms 'biosolids' and 'sludge' have been used interchangeably by the water businesses.

Under the *EPA Victorian Biosolids Guidelines* (EPA Victoria 2004), biosolids are considered to be organic solids derived from sewage treatment processes that are in a state that can be managed to sustainably utilise their nutrient, soil conditioning, energy, or other value (i.e. achieve minimum standards for classification as T3 and C2 biosolids). The organic material from sewage treatment processes that does not fit these criteria can be regarded as 'sludge'.

(Continued on page 10)

BIOSOLIDS NEWSLETTER

Winter 2012 Edition



(Continued from page 9)

The ESC (2012) recently modified the definition of 'biosolids' to align with this EPA definition and proposed the following definitions for biosolids mass produced, mass reused and mass stored:

- **Mass produced:** *the mass dry weight of biosolids produced by the licensee's sewage treatment plants.*
- **Mass reused:** *the mass dry weight of biosolids reuse undertaken in accordance with EPA published guidelines or exempted from EPA licensing on the basis of being recognised as a legitimate reuse activity.*
- **Mass stored:** *the mass dry weight of biosolids stored by, or on behalf of, the licensee.*

In line with the EPA definitions, the ESC states in their recent publication (ESC, 2012) that "biosolids means: a stabilised solid that meets EPA requirements for reuse. It does not include non-stabilised sludge." Biosolids could be considered as stabilised sludge, achieving minimum standards for classification as T3 and C2 biosolids.

The ESC's performance reporting process allows the water industry and the community to easily realise the use of biosolids across the Industry. For example, through the reports it can be seen that more water businesses are reusing biosolids than five years ago.

Further, as the performance reporting process has progressed the definition of what constitutes biosolids is much clearer, providing a simpler and more transparent framework.

Article provided by Aravind Surapaneni, South East Water

References

EPA Victoria (2004) Guidelines for Environmental Management. Biosolids Land Application, Melbourne, Environment Protection Authority Victoria.

Essential Services Commission 2011, *Water performance report – Performance of urban water businesses 2010-11*, December 2011.

Essential Services Commission 2012, *Review of Water Performance Report Indicators – Final Report*, August 2012.

Do you have any biosolids news to share?

If you have articles for inclusions in future editions of the VicWater Biosolids Newsletter please contact VicWater at vicwater@vicwater.org.au