



Victorian Biosolids Task Group

NEWSLETTER No.8

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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 for BTG

The key tasks for the BTG are:

- ◆ development and implementation of strategic advice on biosolids management for the Victorian water industry;
- ◆ identification and co-ordination of biosolids research activity in Victoria and input to national biosolids research programs;
- ◆ provision of links to the Australasian Biosolids Partnership;
- ◆ provision of links with regulators; and
- ◆ consideration of the implications of the findings of the National Biosolids Research Project and implications on EPA's Guidelines for Environmental Management-Biosolids Land Applications (Publication 943).

Task Group Members

Member	Organisation
Michelle Carsen	South East Water
Karen Campisano	Melbourne Water
Joanne Cooper	DSE Office of Water
Hieu Dang	Yarra Valley Water
Doug Gardner	Wannon Water
Bruce Hammond	Goulburn Valley Water
Stephen Lansdell	EPA Victoria
Michael Naughton (Chair)	Barwon Water
Steve Elwell	Gippsland Water
Sarah Johnston	VicWater

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

ANZBP Update
www.biosolids.com.au

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

Literature Compendium

The ANZBP Biosolids Literature Compendium is now available online for subscribers. The Literature Compendium documents progress in biosolids management practices and research

developments in Australia and New Zealand from the past 5 years, as well as planned research. The Compendium consists of a discussion paper which reviews the literature, and a searchable database which categorises the publications. The Compendium will be a valuable asset for researchers with technical matters to address, as well as a tool for policy and communications officers.

Biosolids Production and End Use Statistics

This ANZBP project was undertaken to develop an accurate and comprehensive data-set of Biosolids Production and End Use for Australia and New Zealand. The data provided by WWTPs has been summarised in a report which is now available on the ANZBP Subscribers' website. Please note that the information has been aggregated to produce an overview of production on a national level and does not identify individual WWTP's. Thank you to

all members who assisted this process by contributing data in a timely manner.

Perth Roadshow

In October 2010, the ANZBP held its 6th Roadshow, with this being the first Roadshow to visit Perth.

The Water Corporation kindly hosted the event, which was well attended by a sizeable number of current ANZBP members, as well as others from the Biosolids management community, including researchers, regulators and farmers. Members of the Advisory Board who had travelled to Western Australia were able to share their experiences with the WA attendees and likewise learn from the locals.

The presentations given throughout the day were a combination of research being undertaken by ANZBP members and research that has been undertaken by the ANZBP. The ANZBP thanks the Water Corporation for hosting this successful event.

Community Attitudinal Survey

The ANZBP Community Attitudinal Survey was undertaken to identify community attitudes so communications from the biosolids management community can be meaningful, and the issues of greatest concern can be taken into account in decision-making.

It is true that biosolids managers across Australia and New Zealand have decades of experience in planning and executing biosolids management plans, taking into consideration impacts on the community. These have often been successfully delivered, but not always. While there are lessons to be learned from the successes, we must also learn from the failures. Frequently these have related to a misunderstanding of the levels of community anxiety, or the lack of understanding of community concerns.

The ANZBP Community Attitudinal Survey had two key components: identification of key biosolids issues through dialogue with primary stakeholders (Stage 1); and identification of more general community attitudes (Stage 2).

Because community attitudes can change quickly, the starting point for this research project was to understand the attitudes of key decision makers rather than the community broadly. Groups approached included:

- Health and Environmental Community-based Groups
- Horticultural and grain growers
- Environmental and health regulators
- Industry regulators (e.g. agencies other than environmental and health regulators which have responsibility for regulation of utilities who generate or manage biosolids or their contractors)
- Retailers of biosolids-derived products
- Researchers in the field of biosolids management or environmental or health protection
- Political representatives
- Proponents of non-processed foods

The criteria for selection of interviewees for Stage 1 were that they be involved in or responsible for biosolids management and that their position was one of influence. Such influence might be direct, as in the case of a regulator, or indirect, as in the case of a retailer of products derived from sites on which biosolids might be applied, who could choose to reject such products if controversy arises. The stakeholders interviewed came primarily from Australia and New Zealand. However, these groups were supplemented by information gleaned from stakeholders in the UK due to difficulties in recruiting a sufficiently large sample size in Australia and New Zealand.

The Stage 2 work sought community respondents from Australia and New Zealand. These groups were broken down into two subcategories, affected and unaffected communities. The term 'affected' was not intended to have any pejorative connotations. Rather, the term was used to describe those communities that had some experience with biosolids production, transport or application and who might be expected to have a higher degree of awareness of biosolids or more firm attitudes to biosolids use.

Stakeholders were interviewed, primarily by telephone using structured discussion guides followed by expert interviewers. Among other approaches, comments provided by stakeholders in each country were categorised, as far as possible, into strengths, weaknesses, opportunities and threats (SWOT). Notably, when compared to the results of the broader community survey that was undertaken in Stage 2 (and which is reported below), stakeholders linked biosolids

more strongly with threats and weaknesses than opportunities and strengths. This is not to say that stakeholders perceived biosolids as being threatening or risky, but that they perceived the general community as likely to see issues surrounding biosolids as negative.

There was, nevertheless, consistency among stakeholders' attitudes to and perceptions of biosolids management, with most being supportive of the use of appropriately managed and regulated biosolids for a range of purposes (depending on quality). However, possibly because of the high sensitivity on the part of key stakeholders to community perceptions of the 'threats' associated with biosolids, communication between stakeholders and the general community is scant. While findings from Australia, New Zealand and the UK point to the need to exercise caution when conducting community consultation so that an issue is not raised where one does not exist, there would appear to be scope to develop positive communications programmes. These being to educate the general public about the opportunity to use biosolids sustainably, particularly as is shown below, the community is more supportive of biosolids use than the experts consulted perceived them to be.

The Stage 1 work, led to identification of a range of issues worthy of further investigation in Stage 2 of the survey, which dealt with the community generally. Among these were:

- Ascertaining the perceived differences in attitudes and perceptions of rural and urban communities
- Identifying the groups community members perceived as providing the most credible information on biosolids management
- Determining the uses to which biosolids should be allocated
- Exploring how confident consumers would be in purchasing foodstuffs grown on land to which biosolids had been applied.

Respondents in Stage 2 came from Australia (1020 respondents) and New Zealand (201 respondents). Over all, there were 600 respondents in the affected category and 621 in the unaffected category. Key results included:

- That 33% of respondents had heard of the term biosolids, with a majority of these being from an affected community. Although many could not accurately define the term.

- That, generally, the affected group is more positively disposed toward biosolids use than the unaffected community. This might relate to the fact that the affected community has become used to biosolids use and has not experienced any negative impacts, or has experienced positive benefits. This is borne out by the results detailed below.
- That farmers – a group which might be taken to be a surrogate in this instance for rural dwellers – are notably more likely to buy products grown on land on which biosolids are applied than the rest of the community. That said the majority of both groups are very likely or likely to buy such products.
- That most sources of information about biosolids are not perceived as being particularly credible, aside from CSIRO in Australia and the relevant Crown Research Institutes (CRI) in New Zealand. For example, CSIRO/CRI are seen as 'knowledgeable' by 40.8% of respondents and 'trustworthy' by 42.5%. University researchers, the next most strongly supported group were only seen as 'knowledgeable' by 11.2% of respondents and 'trustworthy' by 13.7%. Federal/National health departments were rated as 10.8% for both categories; these are perceived to be the most knowledgeable and trusted government/regulatory sources of information.
- That all uses of biosolids referred to in the survey were agreed to be or strongly agreed to be appropriate uses of the product. The table below gives some examples:

Table 1: Attitudes to appropriate fertilizer use - Affected vs. Unaffected

<i>Appropriate Fertiliser Use</i>	<i>Affected</i>	<i>Unaffected</i>
<i>For gardens</i>	82.2	68.2
<i>To grow trees</i>	90.6	79.9
<i>For growing non-food products</i>	89.5	78.4

- That 73.2% of affected community respondents and 60.6% of unaffected respondents would be very likely to buy or fairly likely to buy dairy/meat products (where cows/cattle/sheep have grazed on land treated with biosolids). 16.5% and 19.6% would be fairly or very unlikely to buy such products.

The results presented above are only a snapshot of a handful of data from the study. Thinking about community receptiveness however, it would appear that there is generally strong support for sustainable biosolids use and there is room to improve community perceptions though the provision of credible experiential information about the efficacy and sustainability of biosolids.

It is the view of the ANZBP that more targeted and consistent regulation will help to provide the community with confidence that the product can be used sustainably. Data emerging from the survey also suggests that provided with good information, the community supports the sustainable management of biosolids.



Construction of the Barwon Water Biosolids Thermal Drying Plant at Black Rock is nearly complete. Following some recent delays due to wet weather the plant is about to enter the commissioning phase. The plant will be the largest of its type operating.

Interview- Biosolids in Action

Sarah Johnston interviewing Peter Allen – Victorian Stud Farmer

The biosolids task group are committed to sharing and educating people within the industry. Every newsletter we will include a short interview with someone connected to biosolids, whether they be a farmer, consultant or critic. The idea being to showcase some of the attitudes, both good and bad, that exist on biosolids application.

This edition's interviewee is Peter Allen who owns a Hereford Stud Farm, 7km South of Mortlake Victoria. Peter's family have been farming since the 1920s and as well as producing award winning Hereford bulls, he also has a commercial cattle operation and some cropping.

Peter does not profess to have any technical knowledge of biosolids or its treatment processes, but provides an insight that we can all learn from on how different influences can shape people's opinions and attitudes of biosolids use.

Peter's exposure to the application of biosolids began when the settling ponds were established at Mortlake in 1998. He had previously heard rumours of diseases in cattle stemming from application on cattle pastures of biosolids sourced from the Werribee Storage farm. The fact that the water authority (at that time South West Water) was proposing a biosolids processing plant downstream from his property immediately sparked concerns for the safety of his livestock. Peter and a few others concerned by the proposal began lobbying through the community consultation process and were successful in ensuring the plant was moved to another location in 2002. Peter has never held any concerns for his own health only that of his livestock.

Since then Peter's attitude has shifted dramatically to be a proponent of the use of biosolids and feedlot waste. His change of opinion, not surprisingly, has been shaped by the increased information available on biosolids application to crops and the increased standards of treatment. He has also seen a shift in his peers; notably a large feedlot operation near his property which now stockpiles and uses the feedlot waste as a nutrient source. He has also had the opportunity to attend a conference at his local Agricultural College where there were a number of promoters and users of biosolids.

He now recognises that for a sustainable future we need to look to new ways to get the best out of available resources. Peter reflected on his father's application of chemical fertilisers back in the 1920's, even then his father noted that although the first application had a magical response, each further application saw less and less response as the soils became blocked with Phosphorus. He believes that the continued use of chemical

fertilisers will eventually result in a huge detriment to soil quality and cropping alike.

With the increased knowledge of biological fertilisers Peter can now see this being the only way of the future; and this is demonstrated by his recent application of his first 'natural' fertiliser. Peter has also noted the legislative change in America to ban chemical fertiliser use in establishing lawns for newly built houses, he sees this as a strong indication of the way the world is moving forward.

For increased use of natural fertilisers in the future Peter would enlist the support of a consultant to guide him through the whole application process in line with his specific needs.

Peter's overall attitude shift demonstrates a new line of thinking emerging from the increased use and knowledge of biosolids and the treatment processes used. He has been able to speak to his peers and glean a better knowledge of the improved processes for the treatment of biosolids. This has further encouraged him to attend seminars and increase his knowledge base on the product. From protagonist to proponent Peter can see that the continued use of chemical fertilisers that have been applied to some of his soils for 40-50 years are not sustainable and a more natural approach is needed. He sums it up in saying that the natural way "all makes good sense now".

We wish to extend a big thank you to Peter for his time and input. Being able to establish the level of community acceptance, and how that was developed, is instrumentally aligned to the aims of the industry we work in and in particular the future of nutrient recycling.

VicWater Biosolids Webpage

The Biosolids Task Group webpage on the VicWater website (www.vicwater.org.au) has recently been upgraded to better serve the biosolids working community. The purpose of the new webpage is to provide information regarding the Biosolids Task Group and its members, provide a list of biosolids contacts across water businesses and to serve as central reference repository for key biosolids documents.

To access the Biosolids Task Group, select 'Biosolids Working Group' under the 'Task and Working Groups' drop down menu on the VicWater homepage. Alternatively, click on the following link:

[VicWater Biosolids Task Group Webpage](#)

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

Key Contacts

The following are key biosolids contacts for utilities and regulators across the Victorian water industry. If you have a query regarding biosolids these people should be your first point of contact.

Organisation	Contact	Organisation	Contact
Barwon Water	Michael Naughton	Lower Murray Water	Keith Neaves
Central Highlands Water	Jason McGregor	Melbourne Water	Karen Campisano
City West Water	Martin Thurlow	North East Water	Tim Clune
Coliban Water	Ross Johnson	South East Water	Terry Anderson
Dept Primary Industries	David Nash	South East Water	Pam Kerry
DSE	Joanne Cooper	South Gippsland Water	Lale Rogeon
East Gippsland Water	Lara Caplygin	VicWater	Sarah Johnston
EPA Victoria	Stephen Lansdell	Wannon Water	Doug Gardner
Gippsland Water	Stephen Elwell	Western Water	William Rajendran
Goulburn Valley Water	Bruce Hammond	Westernport Water	Geoff Harris
Goulburn Valley Water	Stuart Harris	Yarra Valley Water	Chris Brace
GMMWater	Debra Watson		