



# Victorian Biosolids Task Group

## NEWSLETTER No.9

July 2011

### 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."

### Task Group Members

Member	Organisation
Pam Kerry	South East Water
Karen Campisano	Melbourne Water
Stephen Jones	DSE Office of Water
Chris Brace	Yarra Valley Water
Doug Gardner	Wannon Water
Bruce Hammond	Goulburn Valley Water
Stephen Lansdell	EPA Victoria
Michael Naughton (Chair)	Barwon Water
Stephen Elwell	Gippsland Water
Sarah Johnston	VicWater

### 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).

## ANZBP Update ([www.biosolids.com.au](http://www.biosolids.com.au))

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

### Adelaide Roadshow

On 9 May 2011, the ANZBP held its 8th Roadshow, this being the first Roadshow to visit South Australia. The Roadshow was held at the Adelaide Convention Centre during the OzWater Conference. The event was attended by a number of current ANZBP members, as well as others from the biosolids management community, including researchers and regulators. Members of the Advisory Board gave a number of presentations on some of research projects currently being undertaken by the ANZBP. Some of the key points made during the presentations were:

- ◆ The partnership commenced in 2007 with 33 original members – mainly water utilities

- ◆ In 2011 the partnership has now grown to 45 members across Australia and New Zealand, and includes utilities, regulators, researchers and consultants
- ◆ Major projects undertaken by the ANZBP over the past year were:
  - ◆ Review of each states biosolids guidelines
  - ◆ Community Attitudinal Survey
  - ◆ Literature Compendium
  - ◆ Legal Register
  - ◆ Biosolids Management Statistics

Following the presentations attendees including the SA regulators held informal discussions on the differences in the biosolids guidelines across each state and the advantages/disadvantages of establishing a national guideline or code of practice. It was generally felt guidelines should be less restrictive and more performance based.

### **ANZBP Advisory Board Meeting**

The following day the ANZBP held its quarterly meeting at SA Water House in Adelaide. SA Water House is a showcase of sustainability. Water, energy and waste have all been targeted to create South Australia's first 6 star green star building. Discussions at the meeting included:

- ◆ ANZBP to request a review of the 2004 National Biosolids Guidelines with a view to getting the regulators from each state together.
- ◆ Resourcing for the ANZBP.
- ◆ ANZBP use of the Natural Step Principals of Sustainability.
- ◆ Finalisation of the ANZBP Business Plan.
- ◆ 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 Canberra in October.

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](http://www.biosolids.com.au) or contact any one of our Victorian colleagues on the ANZBP Advisory Board - Michael Naughton (Barwon Water), Karen Campisano (Melbourne Water), Stephen Lansdell (EPA Vic).

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## **The Biosolids Task Group's 5 top issues**

The task group recently revisited their top five Biosolids issues. These issues will influence the task group's area of focus for the next 12 months and as such the task group would benefit from and value your thoughts and opinions on the list.

Feel free to email Sarah Johnston with any comments you have in relation to the following five issues or in fact other issues that you feel warrant consideration or inclusion.

1. **Emerging issues** - new compounds found in biosolids that may pose risks
2. **Reporting** - Uniform Reporting Scheme
3. **Strategy and Policy** - EPA guideline, DSE, high level policy
4. **Quality of Product** - Fit for purpose paper, research through ANZBP, end uses.
5. **Communications** - across the industry such as newsletter, what BTG are doing, what is on the radar.

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## **Barwon Water Biosolids Treatment Facility**

The Barwon Water Biosolids Management Project is now well into the commissioning phase. The high tech biosolids thermal drying plant being constructed by Plenary Environment is about to have dewatered sludge introduced for the first time in order to warm commission the plant, and fine tune the dryers prior to performance testing.

The plant to be operated by Plenary Environment for the next 20 years has experienced delays due

to a challenge to the EPA granting Works Approval, and a manufacturing fault detected in the dryer plates.

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.



Figure 1 - View of Biosolids Plant from the Black Rock Water Reclamation Plant

The two indirect dryers used to dry the biosolids are each made up of oil-heated hollow metal trays, vertically stacked inside an insulated cylindrical metal housing. The plant uses natural gas to heat the thermal oil that is circulated through each of the fourteen dryer trays.

A thermally insulated coater is used to coat seed pellets with the wet incoming biosolids and feed the mix into the top of the dryers. The biosolids are moved across the surface of the trays by raking arms and gradually cascade from the upper to the lower trays. The resulting vapour is

condensed using recycled water and treated, with any incondensables sent to an oxidizer.

The dried biosolids pellets are transported via a screw conveyor to a pellet cooler to reduce the temperature, then to a baghouse to trap dust, before being conveyed into a pellet storage silo.

The combination of temperature and time produces a pelletised, pathogen free product that will meet the Victorian EPA Biosolids Guidelines T1 treatment grade standard, and is ideally suited to land application or higher value use.

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## Gippsland Water Factory Update

The Gippsland community was invited to get an insider's view into the Gippsland Water Factory's Maryvale treatment plant recently when Gippsland Water held a successful open day. Over 500 people attended the open day, held on 10 April, to learn more about the region's newest wastewater treatment and water recycling facility.

The Gippsland Water Factory is a new wastewater treatment system for the central Gippsland region that addresses a serious local environmental issue, while also incorporating water recycling into the solution. The project provides wastewater (sewage) treatment infrastructure servicing a population base of 48,000 and Australian Paper's

Maryvale Mill. The project comprised a treatment plant at Maryvale, 78km of new pipeline and eight new or upgraded pump stations.



The Gippsland Water Factory is effectively two treatment plants in one, with the domestic and industrial wastewater treated in separate streams. Since January 2010, domestic wastewater has been treated to an extra high standard using reverse osmosis, to produce about eight million litres of high quality recycled water each day. This recycled water is sold to Australian Paper's Maryvale Mill for use in its industrial processes.

The treatment plant's industrial wastewater treatment process was successfully commissioned in December 2010, which enabled Gippsland Water to begin treating Australian Paper's wastewater. The GWF team will now work with technical experts to review the plant's performance and identify opportunities for process enhancement over the next two years.

Up to 100 tonnes of biosolids are created each day as part of the wastewater treatment process at the Gippsland Water Factory's Maryvale site. These solids are transported to Gippsland Water's Soil and Organic Recycling Facility located at Dutson Downs for composting.

Gippsland Water's Soil and Organic Recycling Facility treats and recycles prescribed and non-prescribed organic wastes and hydrocarbon contaminated soils. It can manage large or small volumes of liquid waste and accepts prescribed wastes that are classified under the Environment Protection (prescribed waste) (Amendments) Regulation 2007.

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## Mining our Manure Mountains

This is an excerpt from an article in Research and Development section of Sustainability Matters June/July 2011 Edition.

A mountain of waste that grows by a million tonnes every three years from the sewage plants of Australia's major cities and towns is the target of an unusual mining venture.

Scientists in the CRC for Contamination Assessment and Remediation of the Environment (CRC CARE) are working on ways to turn one of the nation's major urban organic wastes into a safe

source of fertility for the continent's depleted soils.

In a 21st century quest to turn 'manure into gold', they are using one of Australia's most sophisticated scientific instruments, the Australian Synchrotron, to find new ways to lock up the toxic heavy metals which accumulate in human waste, so the beneficial nutrients it contains can be used to enrich farmland.

[View full article](#)

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## Australian and New Zealand Biosolids Partnership Website

The homepage of the ANZBP website now has a [News section](#) which provides latest updates on Biosolids related topics. For example:

- ◆ In response to the recent negative media reports around Biosolids, [Sydney Water have produced a Q&A sheet](#) which is available for your interest and information
- ◆ A summary of the results from the Biosolids [Community Attitudinal Survey](#) is also available.

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## VicWater Biosolids Webpage

The VicWater Biosolids webpage is a terrific reference point not only because it contains a list of members of the VicWater Biosolids Task Group but it also provides a list of industry experts in the field of Biosolids from across the Victorian water industry as well as a number of key stakeholders. In addition, you will find the latest top 5 issues the task group are focussing their attention on.

From the VicWater homepage ([www.vicwater.org.au](http://www.vicwater.org.au)), select 'Biosolids Working Group' from under the 'Task and Working Groups', or 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](mailto:vicwater@vicwater.org.au)