




Barwon Water Biosolids

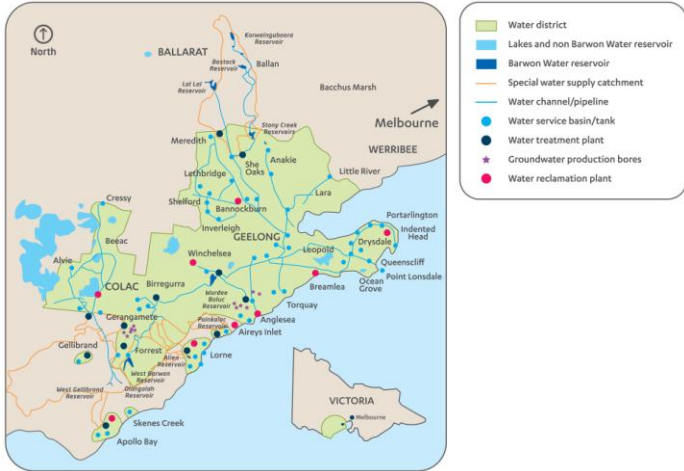
Michael Naughton



22 February 2012



Region Map



- Water district
- Lakes and non Barwon Water reservoir
- Barwon Water reservoir
- Special water supply catchment
- Water channel/pipeline
- Water service basin/tank
- Water treatment plant
- Groundwater production bores
- Water reclamation plant

Biosolids Data

- 1996 – 2001 produced 180,000 wet tonnes.
 - Stored at Black Rock WRP in clay lined lagoons
- 2001 – 2012 produced 480,000 wet tonnes
 - Stored at Western Treatment Plant site
- 2004 – 2012 beneficially reused 110,000 product tonnes biosolids (equivalent of 410,000 wet tonnes)
 - Dried at Barwon Water's short term facility at WTP.

Short Term Biosolids Management Project



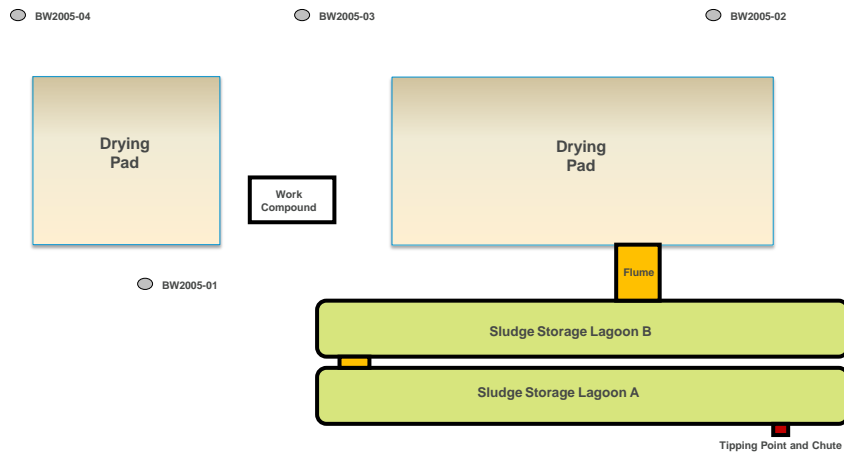
Truck delivering biosolids at Sludge Storage Lagoons

Short Term Biosolids Management Project



Sludge Storage Lagoon

Short Term Biosolids Management Project



Short Term Biosolids Management Project



- Sludge stored for minimum 12 months.
- Volatile solids reduced from 80% to 60%
- Odour potential significantly reduced
- Dozer & excavator used to spread and windrow sludge
- Spends about 2 – 3 months on the drying pad.
- Stockpiled and tested at about 70% dry solids

Short Term Biosolids Management Project



Stockpiled biosolids ready for transport

Short Term Management Project



Biosolids being applied to farmland

Short Term Biosolids Management Project



Canola crop produced with the application of biosolids

Long Term Biosolids Management Project

- Barwon Water Biosolids Management Project is the first water infrastructure project successfully procured under the Partnerships Victoria framework.
- Plenary Environment is the sponsor for the design, construction, operation, maintenance and beneficial use for the twenty year contract term.

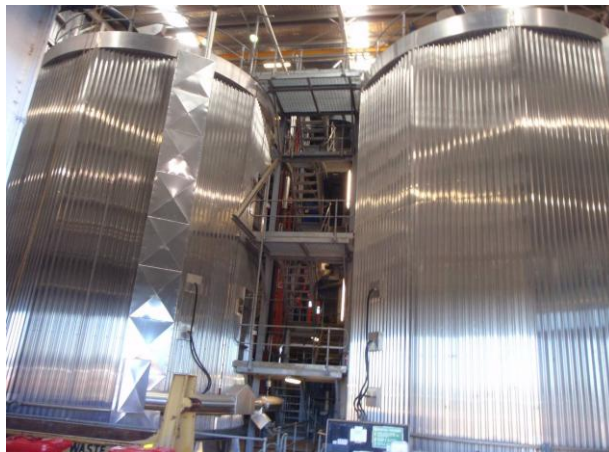
Long Term Biosolids Management Project



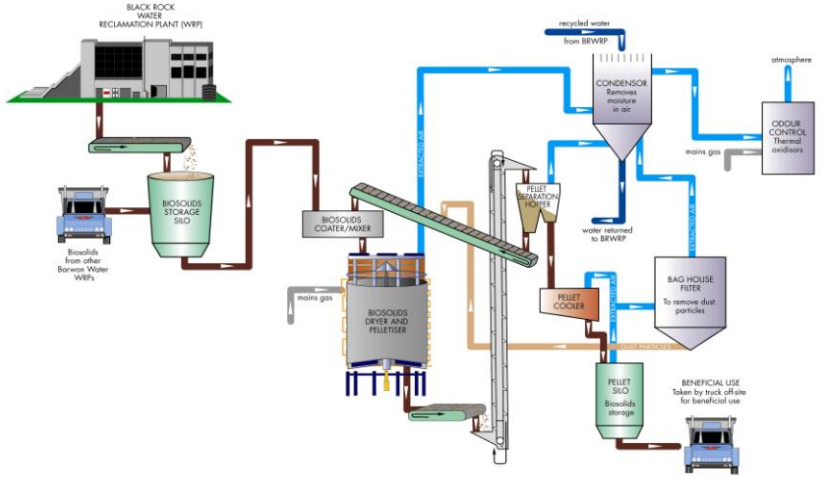
Long Term Biosolids Management Project



Thermal Driers



Process Description



Biosolids Pellets for Blending





Sustainable Operation for the Future

- Barwon Water has invested in a reliable and proven process to ensure biosolids can be beneficially reused in accordance with EPA Guidelines.
- Plant capable of accepting 60,500 tonnes wet biosolids between 12 – 22%.
- Operating life of 20 years.