

MONASH INDUSTRY TEAM INITIATIVE (MITI)

Water Mapping and Sludge Management

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REDUCING WATER USE AND WASTE COSTS

Our project took place at Bega Morwell. As part of Bega Dairy and Drinks, this factory produces yoghurt, sour cream and dairy-based desserts. This is the biggest yoghurt factory in Australia, and produces brands such as Farmers Union Greek Yoghurt, Yoplait, Yogo and Dairy Farmers.

In our project, we focused on different areas. Riley focused on water: reducing water consumption, reusing water and decreasing water costs. Matt focused on reducing sludge volume, including reducing “white stuff” that goes to the drain and reducing “clear stuff” that enters a waste silo.

WATER COST REDUCTION

Riley’s focus was on water cost reduction. This meant reducing water that was being used, reusing water and preventing clean water from being treated.

Actions taken include:

- Changing programming to prevent hot water tank overflowing, sending clean water to on-site treatment plant
- Calculating the cost to the site of heating water and updating the cost of treating water
- Creating a tool to find losses in skim concentration system.

Recommendations for further savings:

- Reusing low-pressure steam condensate that would otherwise go to drain
- Reusing sealing water from homogenizers

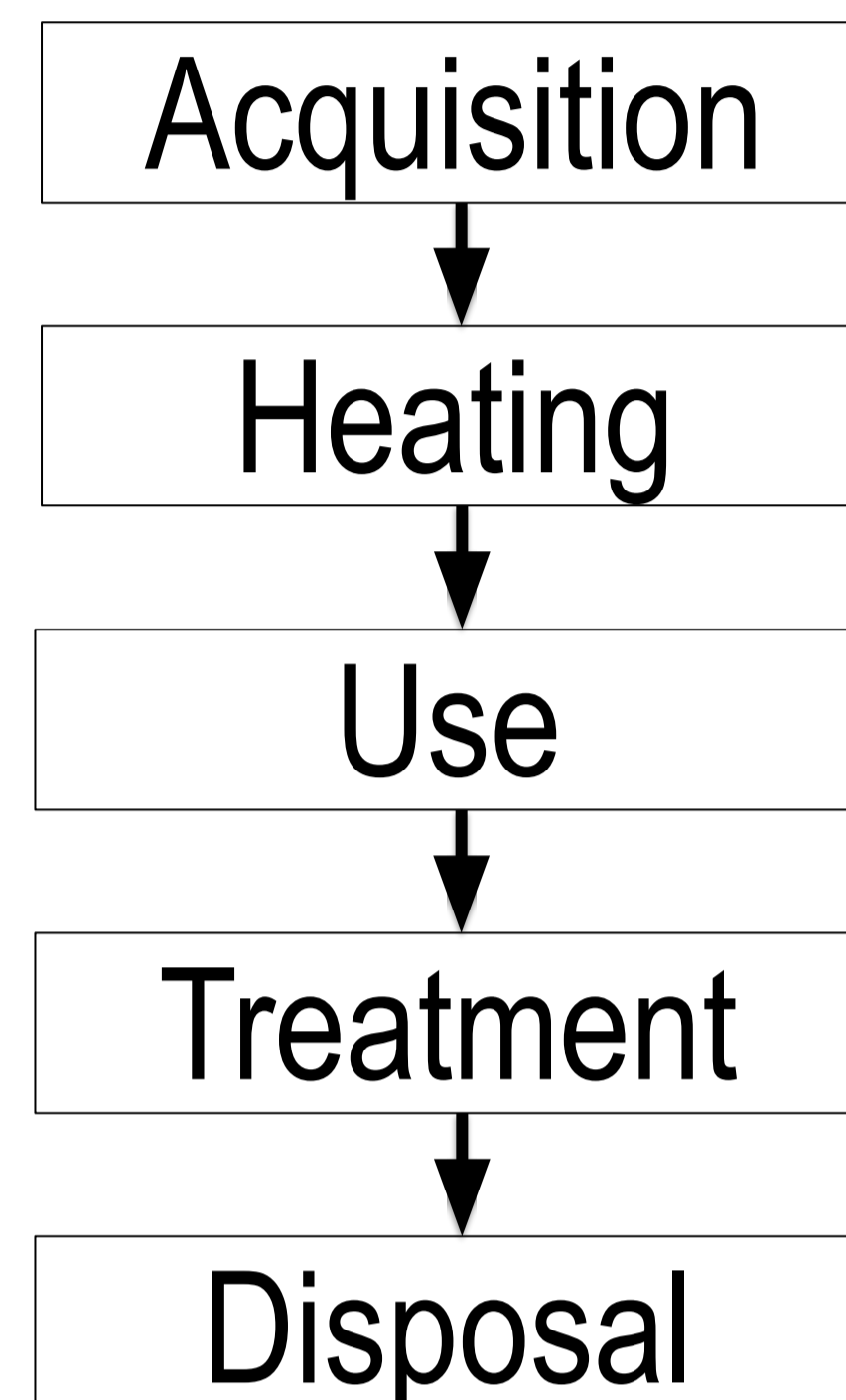
SLUDGE MANAGEMENT

Matt’s focus was sludge management. BEGA pays substantial costs for waste removal (BOD, COD, N, P etc.) and thus there is a vested interest to reduce the amount of waste sent off site. Volume reduction proposal:

- PIG silo removal via 3rd party farmers to pay for removal (must increase %solids)
- Alternative energy producers such as anaerobic digester, pyrolysis organizations

METHODOLOGY

- Manual methods – Install entry into silos
- Opacity meter install – Check solid levels use logic to send fluids to DAF/silos to increase the %solids to make waste more attractive option to farmers



Costs are incurred at every stage of water use

