



**DRAPPER
ENVIRONMENTAL
CONSULTANTS**

Wastewater & Paunch/ Compost Management Meat Processing Facility



Drapper Environmental Consultants were seconded to provide environmental management services for an Export-grade Meat Processing facility in the Lockyer Valley, QLD. The Facility is licensed to process more than 50,000t of meat products per annum. It also processes its own paunch into compost, and will ultimately have its own onsite package sewage treatment plant for human wastewater generated onsite. Treated process wastewater is irrigated on surrounding grazing and cropping paddocks.

Challenges

- The catchment is highly complex with a large upstream area that responds quickly to rainfall well outside the facility's influence.
- Growth over decades has created an ad-hoc approach to wastewater treatment. Multiple anaerobic, facultative and aerobic ponds as well as wet weather storages.
- Groundwater is a valuable resource to both upstream and downstream users.
- Soil types vary across the irrigation area.
- Nutrient levels in the process wastewater are typical of most red meat processing facilities.
- Government departments have a high level of scrutiny on activities, especially composting.

Solution

The Site Management Plans required a refresh to reflect current practices, and bring the Facility into compliance. A water audit was performed internally to identify areas to improve efficiency and reduce usage. Wastewater ponds were resized to improve residence time, and then de-sludged, and lined to minimise infiltration. Water quality was monitored over an extended period to identify any trends, and feedback into the selection of cleaning chemicals. A formal Composting Procedure was documented and implemented to improve efficiency. A strategy for capturing and treating human wastewater separate to process wastewater was prepared, and a capital budget/Business Case prepared.

Key Features

- Improving treatment processes;
- Water audit;
- Preparing a Compost Procedure to optimize pasteurization time;
- MEDLI modelling for pond sizing;
- In-situ permeability testing and evaluation;
- Negotiations with QLD Department of Environment, Science and Innovation for new licence conditions;
- Update site documentation to comply with DESI licence

Drapper Environmental Consultants have over 30 years combined experience providing environmental services Australia-wide. The team are specialists in water, stormwater, wastewater, and environmental services. We design and supply the WATSOL Sewer Overflow technology.

MISSION

Our Mission is to solve our client's challenges in the environmental, water, stormwater and wastewater fields by providing tailored, cost-effective, innovative solutions

Online Dashboard

Realtime monitoring onsite records soil moisture to inform irrigation practices onsite. Pond levels are monitored and observed in real-time, even during emergency shutdowns when the site must be evacuated. Rainfall and climate data predicts extreme weather events to assist in managing pond levels for emergency storage.



Soil Moisture

34.100 % VWC

November 26th 2024, 2:30:30 pm



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