



# TREATMENT SYSTEMS

## for water quality improvement

Regional forum

### AGENDA

<b>Dates</b>	12-13 November 2018
<b>Time</b>	8:30am -5:00pm 12 <sup>th</sup> November, 8:00am – 5:00pm 13 <sup>th</sup> November
<b>Venue</b>	Rydges Southbank, Palmer street, Townsville

<b>Regional forum objectives</b>	
<b>Objective 1:</b>	To share information and options for treatment systems for water quality improvement.
<b>Objective 2:</b>	To identify how various treatment systems can be used to achieve sediment, nutrient and pesticide reductions and water quality improvements.

*Working together to identify, understand and manage our wetlands.*

The regional forum is an initiative of the Department of Agriculture and Fisheries and the Department of Environment and Science (Queensland Wetlands Program).



Queensland Government



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DAY 1 Workshop		Monday 12 November
8.30am	Tea/Coffee	
<b>Session 1: Setting the scene</b>		
8:45am	Welcome and housekeeping Introduction to the forum	Carla Wegscheidl, DAF Matthew Griffiths, DES
9:00am	The role of treatment systems in improving water quality to the Great Barrier Reef	Adam West, DAF
9:20am	Queensland Government Reef Water Quality initiatives	Ben Hammill, Office of the Great Barrier Reef
<b>Session 2: Tools and information</b>		
9:30am	Treatment Systems toolbox Nutrient conceptual models and community of practice	Carla Wegscheidl, DAF Matthew Griffiths, DES
<b>Session 3: Treatment system options</b>		
9:45am	Overview of different treatment options, case studies, pros and cons (20 mins presentation, 10 mins questions): 1. Denitrification bioreactors 2. Bioremediation of wastewater using freshwater macroalgae	Louis Schipper, Uni of Waikato Rocky de Nys, James Cook Uni, MBD Industries
10:45am	Morning tea	
<b>Session 4: Treatment system options (continued)</b>		
11:15am	Overview of different treatment options, case studies, pros and cons (20 mins presentation, 10 mins questions): 3. High Efficiency Sediment (HES) basins 4. Recycle pits 5. Micronutrient dosing – growing diatoms for reducing nitrogen levels	Adrian Crocetti, Water by Design Evan Shannon, FarmAcist Simon Tannock, AlgaEnviro
12.45pm	Lunch	
<b>Session 5: Treatment system options (continued)</b>		
1:30pm	Overview of different treatment options, case studies, pros and cons (20 mins presentation, 10 mins questions): 6. Reactive Filter Media	Eric Love, Centre for Organic Research & Education (CORE)
<b>Session 6: Treatment systems in urban areas – lessons learned</b>		
2:00pm	Water sensitive urban design in Townsville City	Chris Manning, Townsville City Council
2:15pm	Recent research on stormwater quality targets & practices	Alan Hoban, Bligh Tanner
2:30pm	Questions and discussion	
2.40pm	Afternoon tea	
<b>Session 7: Treatment systems in agricultural areas – lessons learned</b>		
3.00pm	Brief introduction and lessons learned: <ul style="list-style-type: none"> <li>Wet Tropics treatment systems in MIPs</li> <li>Babinda wetland and bioreactors</li> <li>Burdekin bioreactors</li> <li>Burdekin treatment wetland</li> </ul>	Australian Wetlands Consulting William Darveniza – Canegrowers/Wet tropics MIP Liz Owen - Jaragun NRM Fabio Manca - QUT Arwen Rickert – BBIFMAC
4.20pm	Panel discussion and questions from the audience	
<b>Session 8: Wrap up</b>		
4:50pm	Wrap-up of the day and information for the field trip	Carla Wegscheidl
5.00pm	Close	

DAY 2 Site Visits		Tuesday 13 November
	<b>Travel to Burdekin</b>	
<b>7:45am</b>	Assemble outside Rydges Southbank, Palmer street, Townsville	
<b>8:00am</b>	Bus departs for Burdekin	
<b>Site visit 1: Constructed treatment wetland</b>		
<b>9:00-9:30am</b>	Constructed treatment wetland on a cane farm, Barratta Ck	Australian Wetlands Consulting Terri Buono, DAF
<b>9:50-10:15am</b>	<b>Morning tea at Mio's college</b>	
<b>Site visit 2: Bioreactor</b>		
<b>10:45-11:15am</b>	Bioreactor bed on a cane farm, Airville	Carla Wegscheidl, DAF Fabio Manca, QUT
<b>11.45pm – 12:15pm Lunch at DAF Research Station, Ayr</b>		
<b>Site visit 3: Pacific Reef Fisheries aquaculture facility – Algae treatment</b>		
<b>12:45-1:45pm</b>	Algae treatment system at Pacific Reef Fisheries, Ayr	Wayne Di Bartolo, Pacific Reef Fisheries
<b>2:00-2:30pm</b>	Macroalgae treatment system at Pacific Reef Fisheries, Ayr	Rocky de Nys, JCU
<b>2:45pm</b>	<b>Bus departs for Townsville</b> <b>Afternoon tea on bus</b>	
<b>Site visit 4: High Efficiency Sediment basin</b>		
<b>4:15-4:45pm</b>	HES basin in Townsville	Adrian Crocetti, Water by Design
<b>4:45pm</b>	Depart for Rydges and airport	
<b>5:00pm</b>	Bus arrives back at Rydges Bus arrives at airport	
<b>Close</b>		