

Moreton Bay Research Station (MBRS) Saltwater Operating Procedure

1. Scope

This procedure is limited to the use and disposal of saltwater at the Moreton Bay Research Station.

2. Objectives

- To avoid risk of harm to the saltwater environment of Moreton Bay;
- To reduce the demand on natural water resources (both fresh and saline).

3. Saltwater Management

3.1 *Supply*

Saltwater is supplied in two laboratory areas in one of two ways:

- Plastic tap fixtures over sinks (not active yet); and
- Dedicated piping systems to aquariums and other plant and equipment.

All saltwater supplies are drawn directly from Moreton Bay. Therefore, no guarantee is given on the water quality. All necessary precautions should be taken when working with this stream.

Caution must be used when using the salt water system, toxic and chemical contaminants can effect both the environment and the functioning of the aquarium system.

3.2 *Disposal of Saltwater*

Saltwater must be disposed of in one of three ways:

- Specially identified sinks;
- Specially identified floor wastes; and
- By the saltwater circulation system for the aquariums.

No chemicals are to be disposed of through the saltwater system.

Any saltwater released from the Research Station must comply with the saltwater environment goals in the table below. Saltwater that does not meet these requirements should be treated to allow safe release or it will have to be disposed of through the chemical waste system.

Only clean (uncontaminated) freshwater can be disposed of through the saltwater system. However, the water parameters must still meet those in the table below or not significantly different from the seawater collected directly from Moreton Bay.

4. Environmental Goals

Any discharges of saltwater from the Moreton Bay Research Station must adhere to the following levels:

PARAMETER	GUIDELINE VALUE	UNIT
Physico-chemical		
Dissolved Oxygen	>6	mg/L
pH	<0.2 pH unit change	--
Salinity	--	--
Suspended particulate matter/turbidity	<10% change seasonal mean concentration	--
Temperature	<2° increase of ambient	
Toxicants (Inorganic)		
Antimony	500.0	µg/l
Arsenic	50.0	µg/l
Cadmium	2.0	µg/l
Chromium	50.0	µg/l
Copper	5.0	µg/l
Cyanide	5.0	µg/l
Lead	5.0	µg/l
Mercury	0.1	µg/l
Nickel	15.0	µg/l
Selenium	70.0	µg/l
Silver	1.0	µg/l
Sulfide	2.0	µg/l
Thallium	20.0	µg/l
Tim (tributyltin)	0.002	µg/l
Zinc	50.0	µg/l
Halogenated Aliphatic Compounds		
Hexachlorobutadiene	0.3	µg/l
Monocyclic Aromatic		
Benzene	300.0	µg/l
Phenol	50.0	µg/l
Pesticides		
Acrolein	0.2	µg/l
Polyaromatic Hydrocarbons		
Polychlorinated Biphenyls	0.004	µg/l

5. Enquiries

Any enquiries in regard to the Saltwater Management Plan should be directed as follows:

Enquiry	Department/Centre	Contact	Telephone
Saltwater Supply (to MBRS)	Faculty of Science	Manager, Moreton Bay Research Station	(07) 3409 9058
Saltwater Supply (in labs)	Faculty of Science	Manager, Moreton Bay Research Station	(07) 3409 9058
Disposal	Faculty of Science	Manager, Moreton Bay Research Station	(07) 3409 9058

6. References

- Environmental Protection Act 1994
- Australian and New Zealand Guidelines for Fresh & Marine Water Quality: National Water Quality Management Strategy 2000
- BCC - The Trade Waste Guide, 2000
- BCC - Industrial Liquid Waste Sewer Acceptance Criteria, 2000
- Sewerage & Water Supply Act 1949
- Workplace Health and Safety Act 1995
- NHMRC & ARMCANZ - Australian Drinking Water Guidelines, 2004
- Water Act 2000
- Marine Parks Act 2004 and Regulations 2006
- Marine Parks (Moreton Bay) Zoning Plan 2008
- Environmental Protection (Water) Policy 2009