

WATER AND ATMOSPHERIC MANAGEMENT

Introduction

Water issues in the Shire affect recreation and livelihoods, through the degradation of aquatic ecosystems and the abundance of marine species. Air quality similarly impacts on the community, through health, and quality of life effects.

News

Major news for 2002 was the completion of the Stormwater Management Plan by Council. The aim of the plan is to minimise the effect of human activity on waterways by promoting responsible behaviour and by controlling impacts.

Work continued in 2002 on the State's 'Reef Water Quality Protection Plan' to protect the Great Barrier Reef from land based sources of pollution. A draft open to community consultation will be available in May.

The Wet Tropical Coast Regional Coastal Management Plan was drafted through 2002.

The Port of Mourilyan has incorporated an Environmental Management Plan as part of its operations. The Plan ensures best practice by the operation in the environmentally sensitive area, and includes monitoring of:

- water and sediments
- seagrass
- fisheries and riparian habitat areas
- acid sulphate soil areas
- introduced marine pests
- bed levelling (dredging)

Results of seagrass monitoring have shown a marked improvement in cover during 2001. This is postulated as due to a lack of seasonal flooding, and indicates that sea grass is capable of rapid recovery.

The Australian Institute of Marine Science (AIMS) has been involved in water quality research, involving sediment, water chemistry and the exotoxicological effects of agricultural chemicals on Barramundi as an indicator species.

Current plans are to continue this work over following years to enable ecological comparisons of river habitat over time.

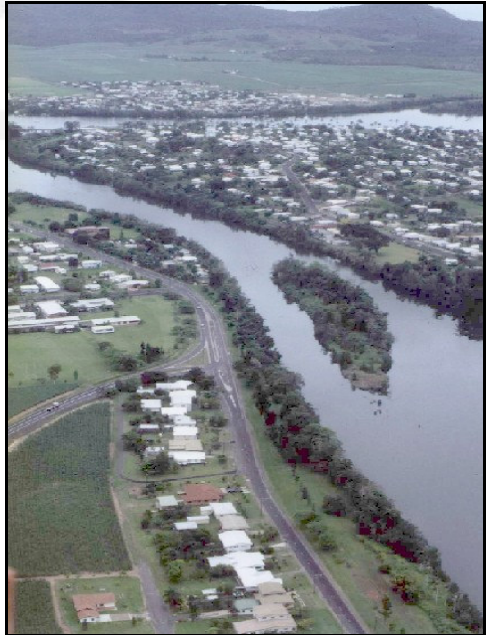
With the recent dry years there has been increased pressure to utilise surface and ground water sources for irrigation.

A fair and equitable system for the Permitting of water extraction has not yet been developed.

Wetlands in the Shire remain in a poor condition, due to water issues and the invasion of weeds.

Indicators

The Queensland Fisheries Service's Long-term monitoring program (results released 2002) described the Johnstone River's habitat as poor in 2001, with a mean disturbance rating of 2.9, due to a lack of riparian vegetation. Water quality however, was excellent with a mean visibility of 81 cm. Species diversity was high with 37 types of fish observed in 2001. A problem for the river was the observance of the introduced pest fish Tilapia.



River Avenue

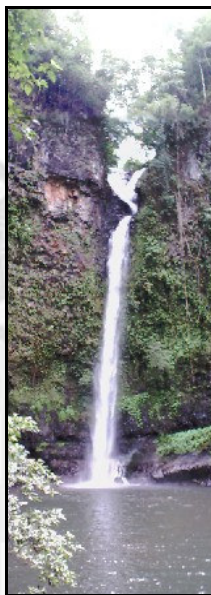
5 facilities in the Johnstone Shire reported emissions to the National Pollution Inventory for 2001-2002. (4 facilities reported in 2000-2001.) The businesses were - Consolidated Meat Group, South Johnstone Mill, Mourilyan Mill, Reliance Petroleum, C & A Pizzolato. Council has plans also to begin reporting. The following levels of substances (in Kg's) were registered:

Substance	2000-2001	2001-2002
Arsenic and compounds	5.3	1.7
Benzene	110	22
Beryllium and compounds	-	0.0020
Cadmium and compounds	0.46	0.14
Carbon monoxide	1,200,000	1,200,000
Chromium (III) compounds	-	0.033
Chromium (VI) compounds	0.98	0.31
Copper and compounds	-	0.027
Cumene	3.1	15
Ethylbenzene	6.2	-
Fluoride compounds	1.8	0.57
n-Hexane	130	24
Hydrochloric acid	-	93
Lead and compounds	36	11
Mercury and compounds	0.030	0.0060
Oxides of nitrogen	320,000	320,000
Particulate matter	160,000	240,000
Polycyclic aromatic hydrocarbons	440	450
Sulphur dioxide	150,000	140,000
Toluene	100	93
Total volatile organic compounds	7,900	5200
Xylenes	35	30

Adapted from the NPI website (www.npi.gov.au)

Water Usage for 2002 (Mega Litres) through town supply -

North	South	Total
2807.44	739.23	3546.67



Nandroya Falls

Complaints received by Council regarding Pollution in 2002 -

Air	3
Odour	14
Noise	17
Water	4
Waste	2
Rubbish	14
Oil spills	1
Other	10

One environmental incident affected the Shire's waterways in 2002. The South Johnstone Mill experienced a waste water pipeline rupture, leading to wastewater entering Stewart's Creek and causing fishkill. The effect of the incident was short lived in duration, and was dealt with by the EPA.

AIMS conducts regular monitoring of coral coverage on the Reef outside Innisfail. The current state of the Reef is degraded (0-10% coral coverage) but recovering from Crown of Thorns Starfish. CoTS were no longer active within the area in 2002.

2002 was a year of low rainfall. This is reflected in the stream discharge volumes the Department of Natural Resources and Mines collect from our major watercourses.

Site	MegaLitres in 2002	Average (over last ~30 years)
North Johnstone River (at Tung Oil)	608600 ML	1687300 ML
South Johnstone River (at Central Mill)	319500 ML	709600 ML
Liverpool Creek	66900 ML	147000 ML
Fisher Creek	13200 ML	36900 ML

Report Card for Water and Atmosphere

Criteria	Grade	Recommendation Group	Explanation
Action on recommendations 4 of 7 recommendations actioned to date	C+	<ul style="list-style-type: none"> - Priority Recommendation - Monitoring - Water Quality - Water extraction 	<ul style="list-style-type: none"> - Nutrient and sediment assessment program not active under DNRM. - Stormwater management plan completed. - Stormwater management plan completed. - No effort towards water extraction management.
Filling deficiencies in data	A	<ul style="list-style-type: none"> - Monitoring 	<ul style="list-style-type: none"> - Now occurring under the Stormwater management plan. Further catchment assessment required.
State of the Shire	C-	<ul style="list-style-type: none"> - All 	<ul style="list-style-type: none"> - No changes have occurred. The dry weather affected water levels and maybe, in consequence, the concentration of some pollutants.
Goal Achievement	A	<ul style="list-style-type: none"> - Monitoring - Water quality 	<ul style="list-style-type: none"> - Stormwater management plan completed and monitoring underway. - Future progress planned.
Community Awareness	D	<ul style="list-style-type: none"> - Stormwater management 	<ul style="list-style-type: none"> - Planned for 2003.

OVERALL GRADE B-

Conclusion

2002 saw the completion of the Council's Stormwater Management Plan. This progressive policy will advance water management through the gathering of data, and by involving the community and industry in better practices; thus ensuring the improvement of water quality. At present Atmospheric management is not a major concern for the Shire, but data continues to be gathered through the National Pollution Inventory.

Future Direction

Further efforts towards monitoring of waterways in the Shire will help to determine the effects of land based practices, and help to protect aquatic industries and recreation.



Liverpool Creek