
Executive Summary: Water and Waste Services Performance Management Report October 2010

The month of October has seen a continued trend of unseasonal rain. This has resulted in water usage being well below historical usage figures and continues to ensure that daily usage is within the targets for maintaining level 1 water restrictions in the Mackay urban area.

Major water projects with the Nebo Rd WTP augmentation and South Mackay Trunk Main continue to progress. The Nebo Rd WTP project has most of its major structures built out of the ground and is therefore less impacted by the wet weather and is still on program to be finished this financial year. The South Mackay Trunk main will continue to be delayed through the effect of wet weather and is not expected to be now completed until early in the next financial year.

The provision of fluoride to the residents of Sarina before the 31 December 2010 as legislated by the state Government remains on track with commissioning likely to occur in early December.

The customer request feedback survey results for the July and August period have been assessed and continue to show strong favorable results in relation to the provision of this service.

Waste services continue to focus on the design work for the capital program for the closure/remediation works of Bayersville, Hay Point, Otterburn and Sarina landfills; the future transfer stations for Hay Point, Otterburn and Sarina; the closure plan for cell 1 of Hogan's Pocket and cell design for cell 2 at Hogan's Pocket.

The water treatment facility at Bloomsbury has been installed and commissioned and should result in a more consistent and higher quality water being provided to the residents.

Director Water and Waste Services

**Performance Management Report
October 2010**

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1 BUSINESS SERVICES

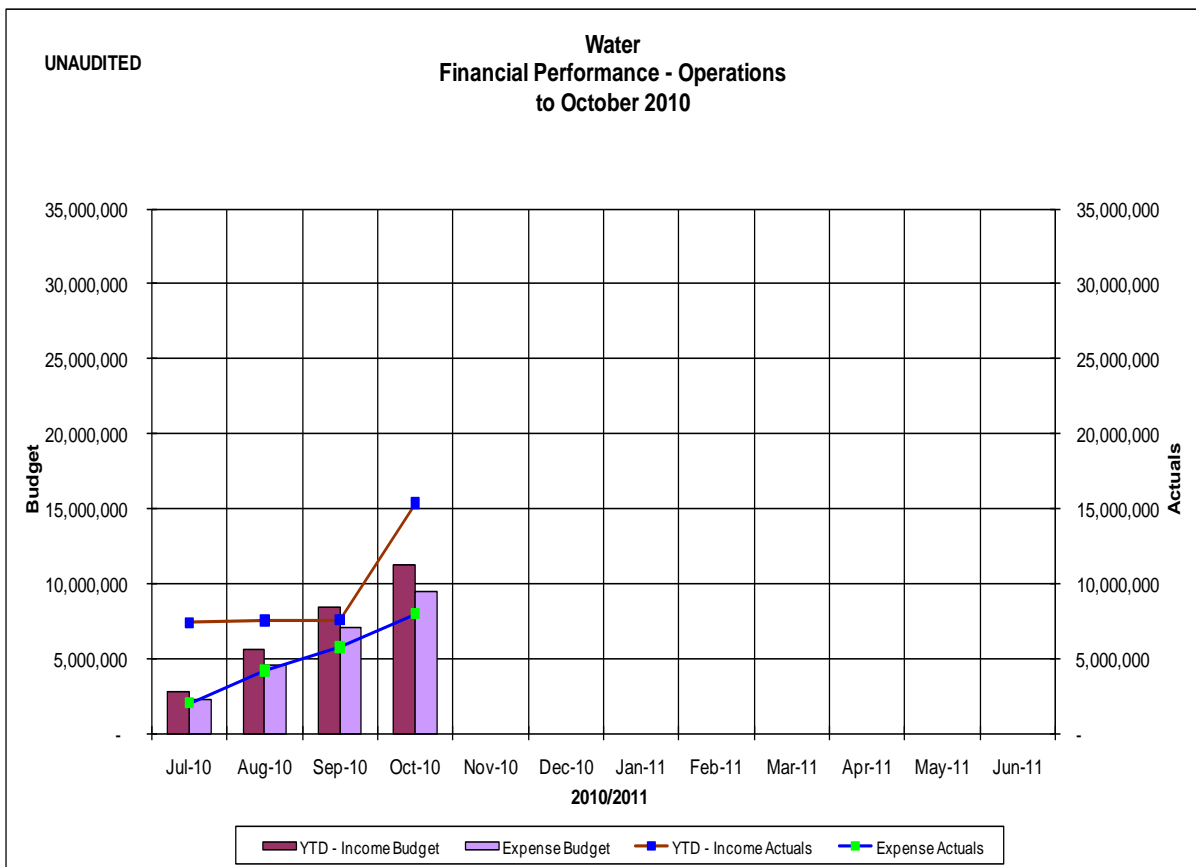
1.1 Finance

The financial performance figures for Water and Waste Services Business Units will be included in the Executive Monthly Financial Report, produced by the Corporate Services department.

Financial Performance of Individual Business Unit Areas

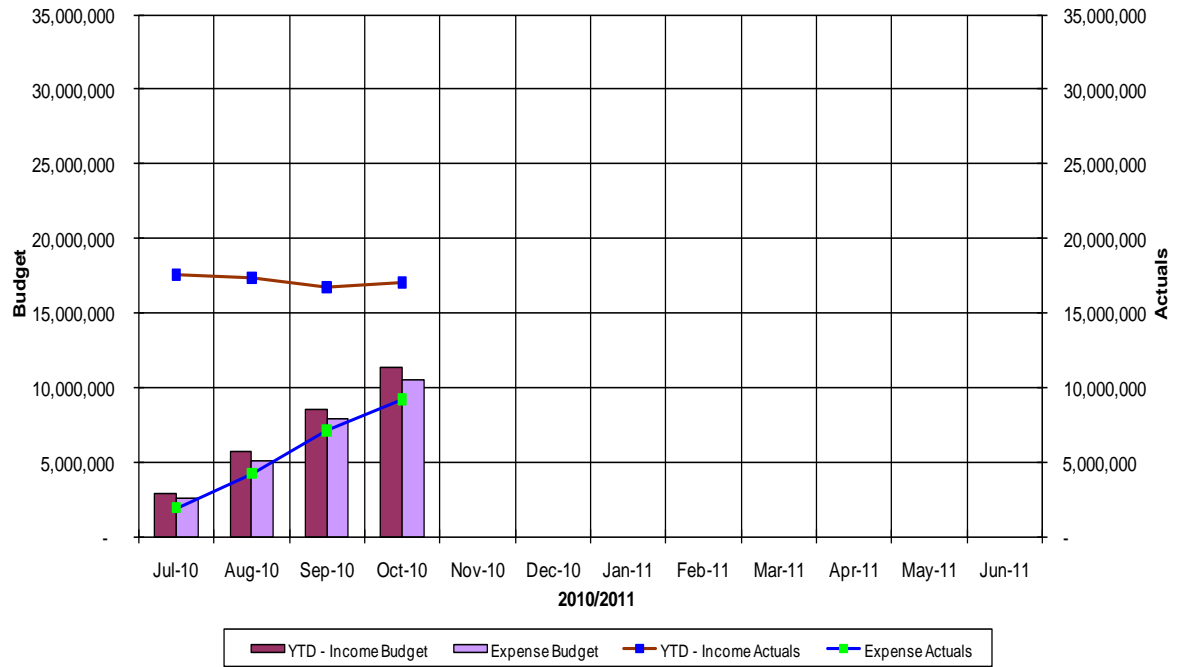
Performance Area	10/11 Budget			Actual + Commit.	Comment
	Original	Revised	YTD		
Water					
Revenue	-33,559,252	-33,609,252	-11,203,084	-15,352,786	
Expenditure	27,203,474	28,379,868	9,459,956	7,988,970	
Wastewater					
Revenue	-34,123,318	-34,123,318	-11,374,439	-17,030,826	
Expenditure	30,389,014	31,522,209	10,507,403	9,190,368	
Waste					
Revenue	-20,965,826	-20,965,826	-6,988,609	-9,936,082	
Expenditure	18,338,057	18,636,482	6,212,161	4,542,456	

The Revenue and Expense information is graphically displayed below.



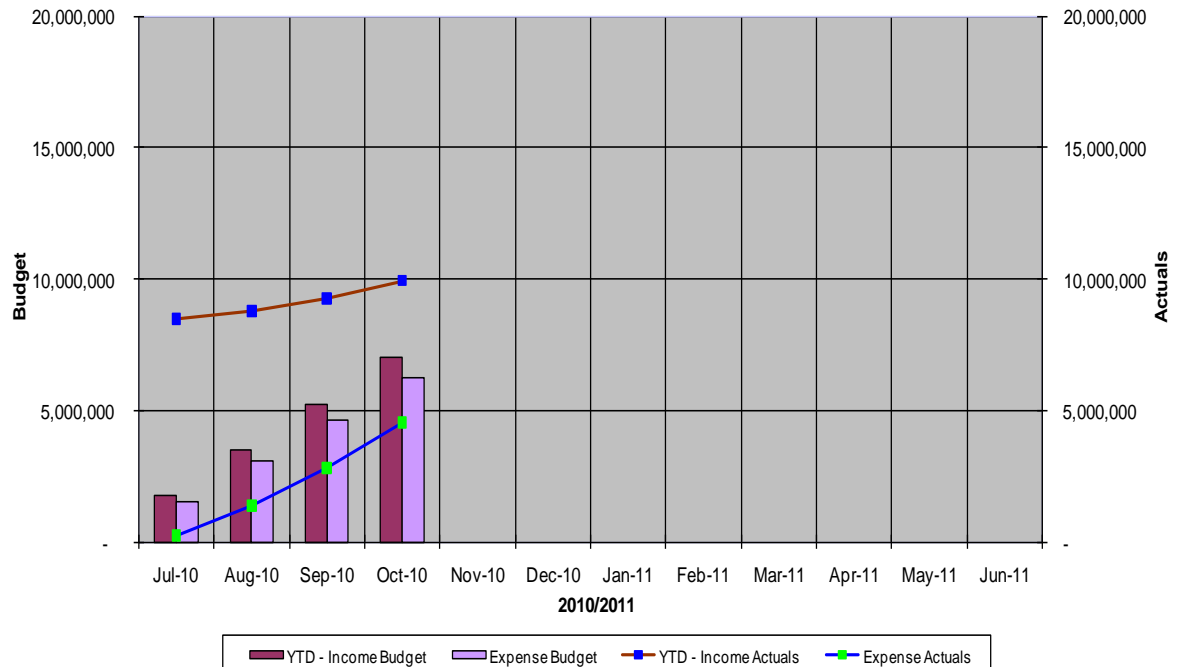
UNAUDITED

Sewerage Financial Performance - Operations to October 2010



UNAUDITED

Waste Services Financial Performance - Operations to October 2010



Other Customer Service Activities:

Item	No.
Water Restriction Exemptions Processes	2
Rebate Applications Processes	5
Water Restriction Enquiries Received	7
Inflow/Infiltration Enquiries Received	1
Trade Waste Enquiries Received	29

Water Meter Applications

A summary of the water meter applications that have been processed are detailed in the table below:

Water Meter Applications for period ended 31st October 2010

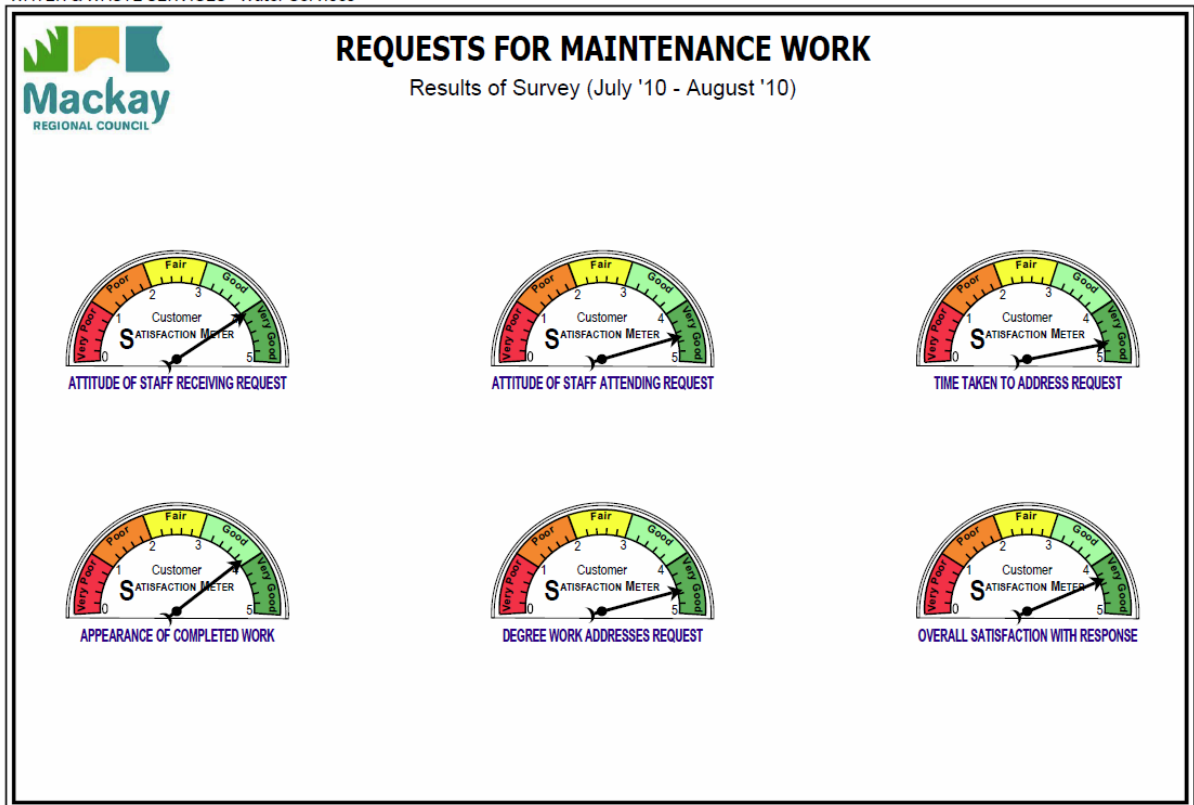
	Applications Lodged				Applications Finalised				Applications Outstanding			
	20 mm	25 mm	>25 mm	Total	20 mm	25 mm	>25 mm	Total	20 mm	25 mm	>25 mm	YTD
Bal b/f 09/10				0				0	69	0	21	90
Jul-10	62	0	7	69	60	0	1	61	71	0	27	98
Aug-10	62	0	6	68	57	0	5	62	76	0	28	104
Sep-10	59	1	2	62	37	1	0	38	98	0	30	128
Oct-10	55	0	3	58	25	0	3	28	128	0	30	158
Total 00/11	238	1	18	257	179	1	9	189	128	0	30	158

Backflow Licensing

There are no statistics on Backflow this month due to migration of information to a new register in Pathways. The migration has to be done by manually re-entering all data into the new register.

Customer Satisfaction Survey Results

WATER & WASTE SERVICES - Water Services



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WATER & WASTE SERVICES - Water Services



Monday, November 01, 2010 © Mackay Regional Council

1.3 Human Resource Management

The following key activities have occurred relevant to human resource management during the month:

- Six members of Water & Waste Services attended training pertaining to negotiation skills for the workplace

Training:

Course Name	No.
Compulsory Training	
Bedford Rd Induction	3
MRC Induction	4
Harassment / Discrimination	0
WH&S Rep & PINS	1
Professional Development	
Negotiating the Gender Divide	6
WH&S Qld Harmonization Workshop	5
Computer Training Word Level 1	3
Plumbing Conference	2
Supervisor Training	13
CCTV Conduit Inspection & Reporting	1

Incident Reports:

Incident Type	No.
No Time Lost (NTL)	4
Medically Treated Injury (MTI)	0
Lost Time Injury (LTI)	2
Non Injury Incident (NII) - Near Miss	0
Public Incident	0

Safety cultural change was supported through:

- WH&S Committee gained another member. Infrastructure Delivery now has a proxy representative.
 - Distribution of legislative changes and safety alerts to all WWS staff
 - Approval gained for new Confined Space Entry Permit
 - Training packages completed
 - Confined Space Documentation (Confined Space entry permit)
 - PPE (Hygiene, Fitting and Management)
 - Training packages under production
 - PPE Equipment Bags – Management and Distribution Policy
 - Coaching of supervisors regarding correct forms and process for Hazard Inspections and Rectification Action Plans
-

-
- Coaching of supervisors regarding process for booking personnel for mandatory training,
 - Emergency Response plan and associated documents for GE Money Building approved for distribution
 - Audits undertaken to find gaps in compulsory training for
 - Confined Space
 - Trenching
 - Low Voltage Rescue
 - Working at Heights
 - Co-ordination of Confined Space Training for all personnel as required.
 - Evaluation of Quotes submitted for the Supply and Management of the Gas Detector fleet.
 - 5 x of Water & Waste Services personnel attend a free WH&S Harmonization Workshop hosted by WH&S Qld

1.4 Systems and Processes

The following activities have occurred with regard to the improvement of quality systems for the month:

- Presentations to key stakeholder of a Quality Management Systems to address and manage process flows and document control

IT Projects

- Initial set-up of Monitor-Pro (Statistical Database) scheduled for early November.

1.5 Governance

- Drinking Water Quality Quarterly Reporting has been submitted to DERM
- The Risk Workshop for the compilation of the Drinking Water Quality Management Plan (DWQMP) has been scheduled for second week of November.

1.6 Communication

The following key activities have occurred in relation to communication and promotion of the water business for the month.

- Directorate promotion:
 - Updated MRC website with water usage stats and water interruption notices
 - Progressed new draft structure for the Water and Waste Services web pages
 - Water saving & recycling tips and planting over pipes articles sent to Infocus
 - Letters for Bloomsbury residents re: upgrades to water treatment plant
 - Release on Executive Manager Award and South Mackay trunk water main
 - Public notice on fluoridation of Sarina water supply
 - Communication plans:
 - Water demand management – appointed external consultant to produce mass social marketing campaign
-

- Trade waste – follow up campaign for trade waste was prepared and submitted for approval
 - Recycling – finalised and recorded television and radio ads for the National Recycling Week campaign. The campaign consists of 2 weeks of advertising on TV and radio (1/10/10 – 14/10/10) and 3 newspaper advertisements. The main focus of the advertising is to advise residents of what they can and can't put into their yellow lidded recycling bin
 - National Water Week – Winner of the National Water Week poster competition was announced. A presentation was made at the winning school's parade on 25/10/10. The winning school won a \$1000 Waterwise Garden Gift Package. The runners up won Waterwise books for their school
- Education:
 - The following schools received water education during October:

School	Visit Type	Sessions	Students
Walkerston State School	Water education at the MRF	2	50
Sarina State School	Classroom water education	2	144
Total		4	194

- Internal communication:
 - Submitted a water saving tip and waste and recycling tip into the Grapevine
 - Weekly Water Services update – distributed on a weekly basis.

1.7 Scientific and Analytical Services (SAS)

Monitoring Program

The monitoring programs that were conducted in October were;

- **Raw sewage characterisation of the Mirani STP:** This monitoring program will assist in the upgrade to the Mirani STP.
- **Raw water characterisation at the Marian Weir:** This program tests the raw water at the Marian Weir which will assist in the design of a new water treatment plant for the townships of Mirani and Marian.
- **Bloomsbury Water Treatment Plant validation testing:** This program tested the new treatment plant at Bloomsbury to ensure that it met set water quality criteria as set out by the Australian Drinking Water Guidelines (ADWG).

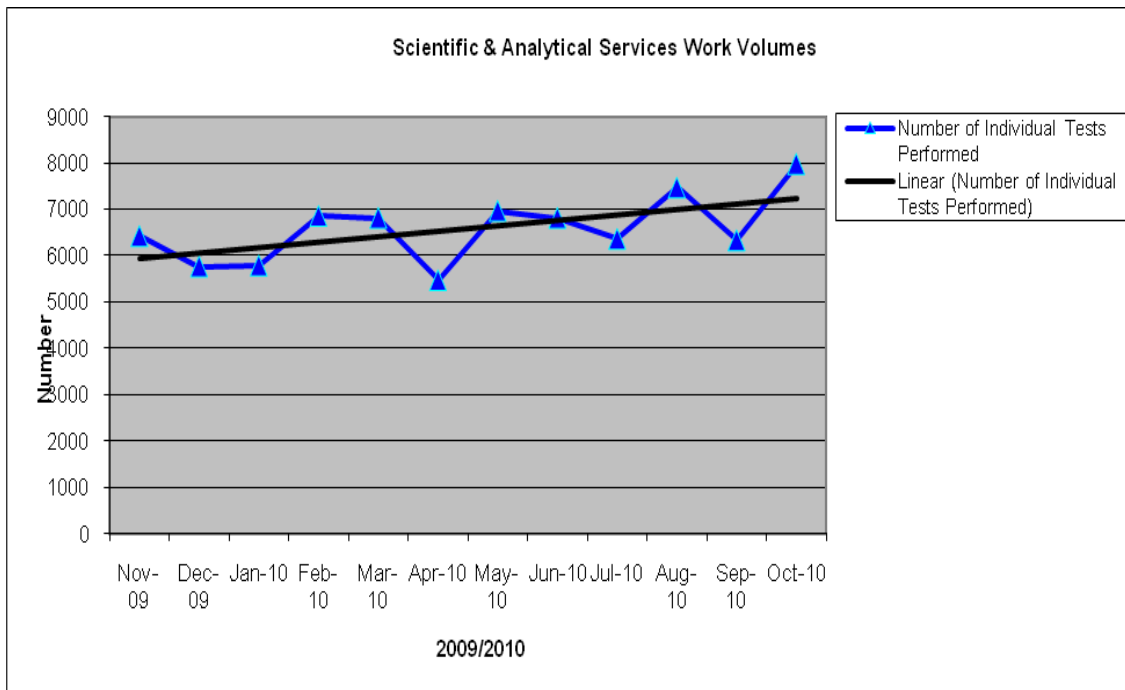
Laboratory Performance Statistics:

KPI	This Month	12 M-to-Date	KPI
Registrations	177	2068	150
Samples	358	3788	300
Test Types	92	114	90
Individual Tests Performed	7984	80190	5500
Clients	26	37	20

Registration:

Customer	No.
Water & Sewerage	141
Waste	10
Other Council Departments	9
External Clients	17

The following graph details the number of tests performed by the laboratory over time:



NATA accreditation

SAS has submitted some of the documentation that meets the conditions as set out by NATA. In the first weeks of November, the rest of the documentation will be submitted to NATA for their assessment.

2 PLANNING & SUSTAINABILITY

Activity No.	Project / Activity	Status	Critical Issues
<i>1. Strategic Asset Management</i>			
1.1	Capture of Asset data	Water and Sewer Pipeline information largely collection. Treatment plant	Recruiting for vacancies.

Activity No.	Project / Activity	Status	Critical Issues
		information not commenced. Little progress from last month.	
1.2	Inflow and Infiltration Strategy for entire MRC Region	I & I program currently limited to smoke testing which is being carried out by Operations section. The usual defects such as cracked pipes, low overflow relief gullies and damaged vents are being identified.	
1.3	System Leakage Management Plan	See item 2.5 below – Water Demand	
1.4	Water Supply Disinfection for Mackay City	The issue of disinfection is being reviewed as part of the risk assessment workshop to be held for the development of the DWQMP.	
2. Strategic Infrastructure Planning			
2.1	Mackay Water Supply Hydraulic Model for Mackay Urban area	All pipes model has been completed and is now in place for interrogation, calibration will occur over future years.	Involvement of field staff in calibration process.
2.2	Sewerage Hydraulic Model for Mackay Urban area	All pipes model has been completed and is now in place for interrogation, calibration will occur over future years.	Involvement of field staff in calibration process.
2.3	Sewerage Strategy Report for Mackay City	Work is still progressing and presentation to Council scheduled for late this calendar year.	Population projections and identification of where growth will occur.
2.4	Regional Water Supply Report	Brief is being prepared to seek consultant to undertake comprehensive review of current situation and options for Council. Not expected until	

Activity No.	Project / Activity	Status	Critical Issues
		next year.	
2.5	Demand Management	Strategy report now due early November.	
2.6	Sarina Sewerage Treatment Plant Planning Report	Land acquisition process is continuing. Delivery method for project and scope are being developed in conjunction with regulator expectations.	Timing for delivery of the new plant in the current TEP with DERM will be difficult achieve.
2.7	Water Supply Planning Report for Mirani and Marian	Draft report on river off take options under review. Recommendation to Council expected before end of year.	
	Sewerage Planning		
2.8	Report for Mirani and Marian – upgrade of Mirani WWTP	A Transitional Environmental Program has been submitted to DERM, awaiting feedback.	
2.9	10 Year Capital Plan	Ongoing development of priorities based on growth and asset performance. Projects for next year are under assessment for works requirements and detailed briefs are being developed.	Planning for out of sequence development work. This is not currently being done.
2.10	Eungella Integrated Water Management Analysis	See item 2.4	

3. Detailed Infrastructure Planning

3.1	Implementation of planning activities associated with Year 1 Capital Plan	In house resources have been recently appointed and consultants will assist in completing business cases. This is an ongoing process.	
3.2	MWRP –Water	Modeling work continues to	Licence compliance.

Activity No.	Project / Activity	Status	Critical Issues
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	Balance Model	identify options relating to recycled water constraints. Discussions with DERM are ongoing to determine the way ahead.	
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4. Development Assessment

- | | | | |
|-----|------------------------------------|--|---|
| 4.1 | Development Approvals - Planning | Ongoing input into development approvals and operational works reports as required. | |
| 4.2 | Development Approvals - Compliance | Working with Development Services – Engineering team to remedy issues associated with compliance and inspection. | Expectation that master planning is in place for out of sequence works. |

5. Policy & Standards




- | | | | |
|-----|--|--|--|
| 5.1 | Review of Water Services engineering guidelines, planning policies and standard drawings | Local resources engaged to update some standard plans. | |
|-----|--|--|--|

3 INFRASTRUCTURE DELIVERY















Summary of Water Services Current Capital Program

The following table summarises key projects in the Water Infrastructure Delivery budget for 2010 / 2011.



Water Projects









Legend	
On track	
Of concern	
Not on track	

Project	Status	Budget	Time	Comments
Boundary Rd water main	Construction	●	●	Initial funding has been received from developer for pipe procurement.
Critical Issues	<ul style="list-style-type: none"> Wet weather 			
Connors Rd water main, Paget	Construction	●	●	Wet weather is impacting on progress of this job
Critical Issues	<ul style="list-style-type: none"> Existing services and interfaces with pipe route for safe access for construction and maintenance activities Wet weather 			
Tass St Water main	Design	●	●	Work package ready for construction in November
Critical Issues	<ul style="list-style-type: none"> Wet weather 			
Nebo Rd WTP Upgrade	Construction	●	●	Commissioning plan being reviewed
Critical Issues	<ul style="list-style-type: none"> Functional design specification to be approved Detailed schedule and commissioning plans 			
Dumbleton Raw Water Trunk Main and Pump Station	Planning / Design	●	●	Operational security is critical driver. Costs estimate being prepared
Critical Issues	<ul style="list-style-type: none"> Completion of TOC and planning of works for delivery in FY10/11 Timing of construction activities to minimize operational risks Land requirements being progressed. 			
Marian & Mirani Augmentation	Planning / Design	●	●	Designs works progressed for procurement and tendering
Critical Issues:	<ul style="list-style-type: none"> Procurement to be undertaken in November Schedule for program of works to resource MRC construction crews to deliver 			
South Mackay Trunk Main	Construction	●	●	Site works commenced in September. Wet weather experienced.
Critical Issues	<ul style="list-style-type: none"> Wet weather will cause further delays to the completion date Budget review for funding for June 2011 completion 			
Middle Creek Dam Nib Wall Removal	Construction completed	●	●	Site works completed and flood study delivered
Critical Issues	<ul style="list-style-type: none"> Planning of future works required to comply with dam safety requirements 			

Project	Status	Budget	Time	Comments
Shakespeare St water main augmentation	Procurement			Construction to commence in November
Critical Issues	<ul style="list-style-type: none"> Design for 300 main is priority for procurement due to lead time on material MRC construction crew to undertake these works 			
Broad St water main	Construction			Pressure testing in progress
Critical Issues	<ul style="list-style-type: none"> Construction to be completed ahead of MRD works 			
Bloomsbury WTP Upgrade	Completed			Plant producing water for Bloomsbury residents
Critical Issues	<ul style="list-style-type: none"> Monitoring of plant performance over seasonal conditions 			
Digitisation of Telemetry	Design			Fibre optic to be installed to Nebo Rd WTP
Critical Issues	<ul style="list-style-type: none"> Mirani priority area to establish telemetry network Mackay network to be integrated onto ClearScada to provide capacity for development Radio survey 			
Nebo Rd Fluoridisation	Commissioned			Final subsidy claim to be submitted.
Critical Issues	<ul style="list-style-type: none"> Finalisation of documentation for completion of project report. Costs to be finalised for submission of final subsidy claim. 			
Sarina Water Supply Main	Construction			Remaining works to be completed in November. All pipe installation complete.
Critical Issues	<ul style="list-style-type: none"> Finalisation of site works with power supply and controls 			
Small Community Fluoridation	Construction			Site works progressed at Marwood bores
Critical Issues	<ul style="list-style-type: none"> Commissioning of plants prior to December 31, 2010 			

Waste Water Projects

Project	Status	Budget	Time	Comments
Sarina Water Recycling Facility	Development			Geotech work commenced. Environmental approval work package out to tender. Delivery strategy & land procurement progressed

Project	Status	Budget	Time	Comments
Critical Issues	<ul style="list-style-type: none"> Land acquisition Geotechnical assessment of site and mains corridor Environmental assessments for development applications Project delivery mechanism and management plans to be finalised 			
Sarina SPS 3,4,5,6 & 8	Construction			Electrical package awarded for December completion
Critical Issues	<ul style="list-style-type: none"> Wet weather Finalisation of easement at SPS 8 			
Pumping Stations – Beaconsfield, Coles Rd & Gordon St	Commissioned			Pump stations operating with minor defects being addressed.
Critical Issues	<ul style="list-style-type: none"> Successful completion of proving period for decommissioning works to be finalised Handover documentation 			
Sarina #2 SPS	Design			Rising and gravity main design completed and progressing to tender
Critical Issues	<ul style="list-style-type: none"> Tender of mains works Electrical design DERM approval for pump station Packaging of pump station and mains upgrades split to mitigate potential time delays for DERM approvals on the pump station.			
Schmidtkes Rd Pump Station	Commissioned			Pump stations operating with minor defects being addressed.
Critical Issues	<ul style="list-style-type: none"> Successful completion of proving period for decommissioning works to be finalised Handover documentation 			

4 OPERATIONS

4.1 Water Treatment System Performance

This report covers the month of October. The main focus for water treatment remained the capital works at Nebo Rd WTP.

The Chemical and Dewatering Buildings are approximately 95% complete. Concrete floors have been poured in the Caustic and PAC rooms as well as the switch room. The structural

steel work for the roof has been installed. The River Water Dosing Tank is approximately 30% complete.

Construction of the sludge thickener tank, thickened sludge tank, and the wash water tank is complete. The in ground and below ground pipe work is approximately 75% complete in total.

The wash water tank and associated pumps and pipes are approximately 75% complete. There was a major shutdown of Nebo Rd WTP on the first weekend in October that was planned as a 14 hour event and completed well within the allocated timeframe. The work was an upgrade to the Stage 1 Filter Pipe Work.

The Small Community Fluoride package plants have been relocated to Sarina WTP and Marwood Bores Pump Station site Installation of ancillary equipment is 95% complete and commissioning is expected to take place in the last week of November. Earthworks for these plants have been completed.

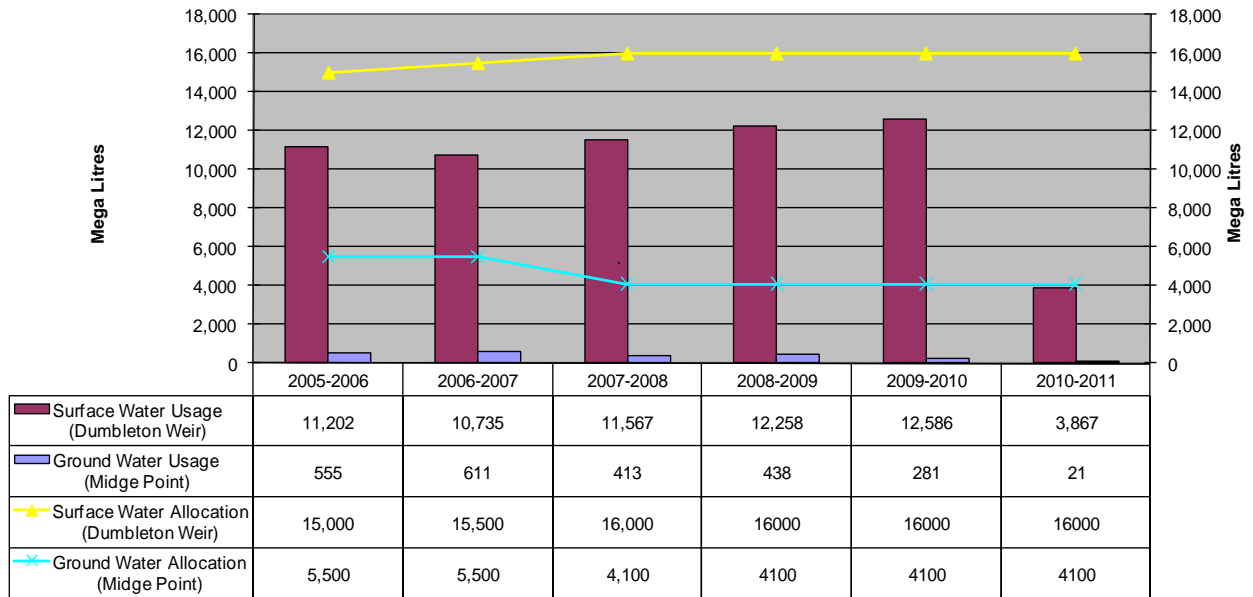
Dam levels in the region remain high as summarised below, with the wet season rain followed by intermittent unseasonal rain replenishing the Dumbleton and Mirani bulk water supplies.

Water Storage Levels

AS AT 31 OCTOBER 2010		
Weir / Dam	Volume / ML	%age
Mirani	2920	63
Marian	3985	100
Dumbleton	6320	71
Middle Creek	1486	100
Peter Faust	424300	86
Teemurra	147500	100

A summary of the water use against SunWater allocations is detailed in the figure below.

SunWater Allocation vs Usage
1 July 2005 to 31 October 2010
(Mackay Only)



Mackay (Nebo Rd) Water Supply Summary

Water consumption in October has remained lower than the equivalent period of the previous year with the average consumption being 30 ML/d.

Annual consumption is forecast at being less than 09/10 (12,585ML), which is well within the available SunWater allocation of 16,000 ML. Ground water (bore) usage was 0 ML.

Water Source Performance Summary

	Allocation (ML/yr)	Oct (10/11) Consumption (ML)	Sept (10/11) Consumption (ML)	Aug (10/11) Consumption (ML)	YTD Consumption (10/11) (ML)
Dumbleton Weir	16000	927	959	1002	3944
Mackay Bores	5500	0	0	5	6

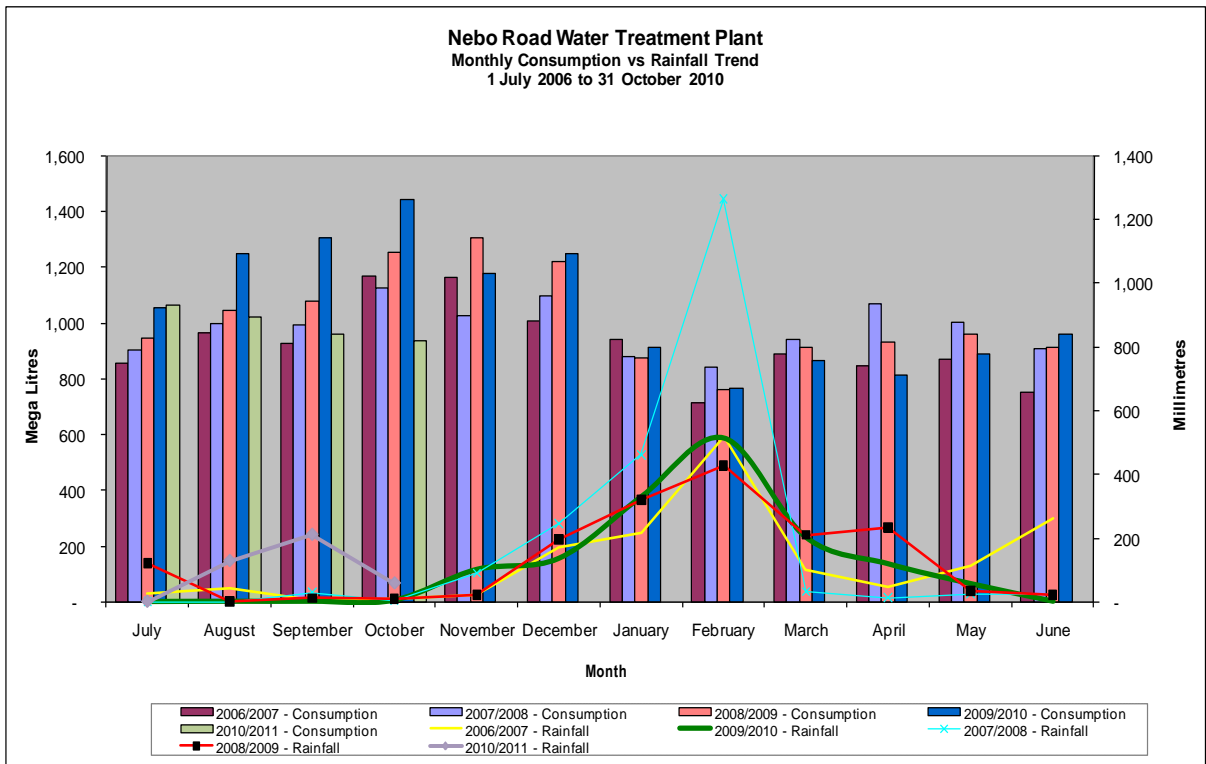
Water Consumption Performance Summary

	October	September	August
Monthly Water Consumption (ML)	911	918	971
Average Daily Water Consumption (ML)	30	31	31
Maximum Daily Water Consumption (ML)	39	36	39
Average Water Consumption *(Litres per	267	282	285

Equivalent Person per Day)*			
Rainfall (mm)	58	**212	129

* Based on an estimated equivalent population of 110,000 Treatment Plant capacity to approximately 50 ML/day
 **The rainfall value for the previous month was incorrectly recorded as 111 mm. This anomaly was investigated and rectified.

Consumption trends have dropped again due to continued unseasonal rainfall with the daily average down by 1 ML from the previous two months. Maximum day demands reached, 39 ML/d in October, 36 ML/d in September, and 39 ML/d in August.



Sarina and Beaches Water Supply Summary

A summary of the water supplied to Sarina and the surrounding communities is detailed below.

Water Source Performance Summary

	Allocation (ML/yr)	Oct (10/11) Consumption (ML)	Sept (10/11) Consumption (ML)	Aug (10/11) Consumption (ML)	YTD Consumption (10/11) (ML)
Mt Blarney WTP (Plane Creek)	N/A	26.4	25.3	33.6	116.2
Sarina Bores	200	14.8	14.2	10.04	48.18
Marwood Bores	350	23.91	26.6	33.68	123.21
Bally Keel Bore	150	6.4	6.5	8.59	31.77
Armstrong Beach Bore		3.1	2.8	3.05	11.83

Water Consumption Performance Summary

	October	September	August
Monthly Water Consumption (ML)	74.61	75.4	88.96
Average Daily Water Consumption (ML)	2.41	2.51	2.87
Average Water Consumption *(Litres per Equivalent Person)	267	279	319
Rainfall (mm)	75	90	105

*Based on an estimated equivalent population of 9000

Pioneer Valley Water Supply Summary

Demand has reduced in all areas to a more reasonable level for this time of year the high level of demand has abated as a consequence of unseasonal rainfall, as well as an increase in water restrictions which were supported by water saving advertising campaign.

Water Source Performance Summary

	Allocation (ML/yr)	Oct (10/11) Consumption (ML)	Sept (10/11) Consumption (ML)	Aug (10/11) Consumption (ML)	YTD Consumption (10/11) (ML)
Mirani Bore	100	7.1	8.1	7.75	31.12
Marian Bore	95	17	16.95	18.99	72.48
Pinnacle / Garget	60	1.53	1.72	1.74	6.84
Finch Hatton	46	2.26	2.06	2.78	9.85

Water Consumption Performance Summary

	October	September	August
Monthly Water Consumption (ML)	27.89	28.83	31.26
Average Daily Water Consumption (ML)	0.9	0.96	1.01
Average Water Consumption (Litres per Equivalent Person)	241	257	270
Rainfall (mm)	51.5	177	76

- Based on an estimated equivalent population of 3730EP

Remote Water Treatment Sites Performance

A summary of the water supplied to the remote sites is detailed below.

Water Source Performance Summary

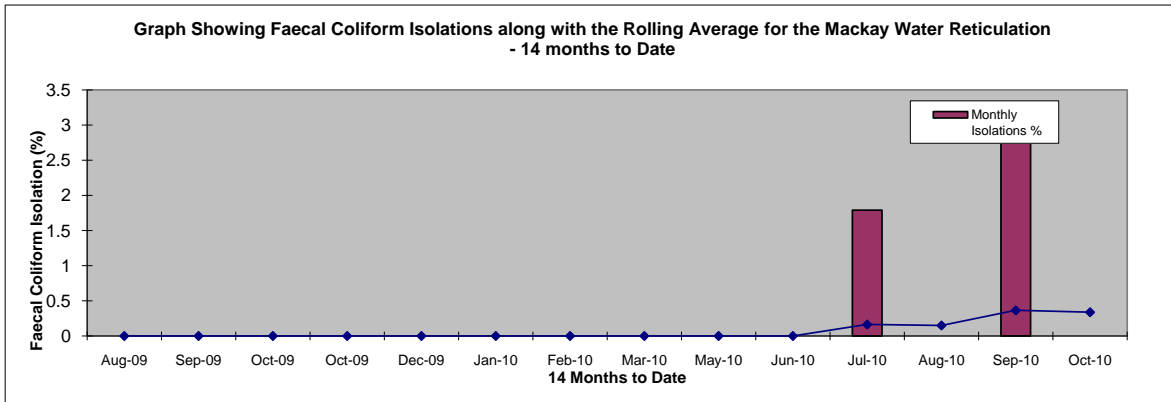
	Oct (10/11) Consumption (ML)	Sept (10/11) Consumption (ML)	Aug (10/11) Consumption (ML)	YTD Consumption (10/11) (ML)
Eton	3.06	4.24	3.98	11.18
Calen	2.05	2.18	3.8	9.06
Bloomsbury	0.85	0.83	1.08	2.76
Midge Point	13.17	15.97	23.95	57.9
Koumala	1.16	1.07	1.38	4.85

4.2 *Water Quality*

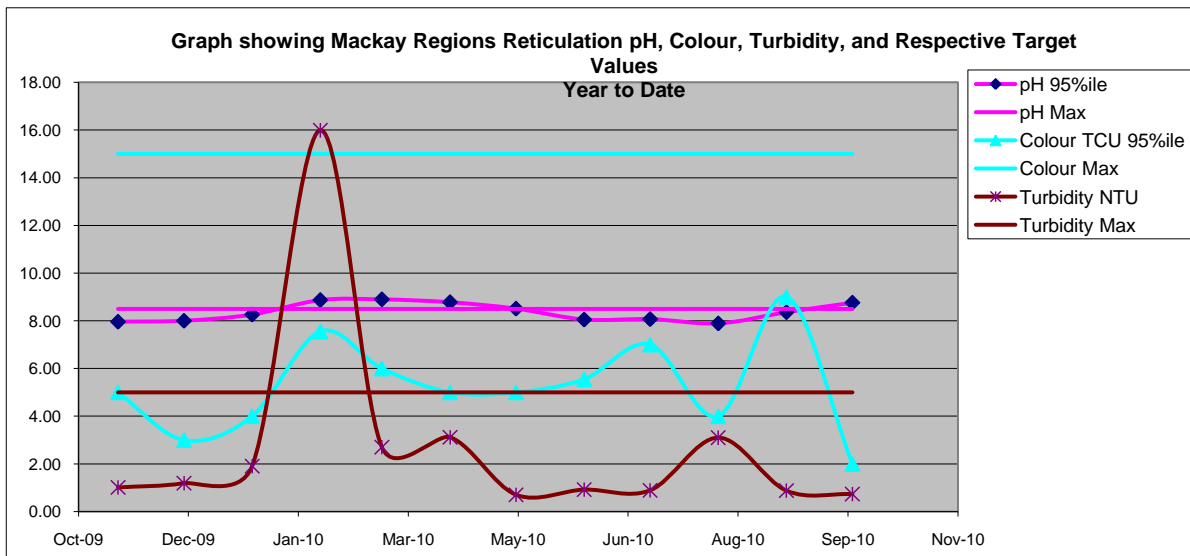
There have been two faecal coliform isolations detected in the region to October 2010. This equates to a 14 month rolling average of 99.7% compliance, which is higher than the customer service level target of 98%. A summary of the water quality performance data for the region is detailed in the following graphs.

An isolation has been recorded for Sarina and is a consequence of the reservoir roof leaking. The resultant infiltration into the reservoir after a dry period of weather provided a substantial source of contamination. The reservoir has been taken off line and repairs have been programmed.

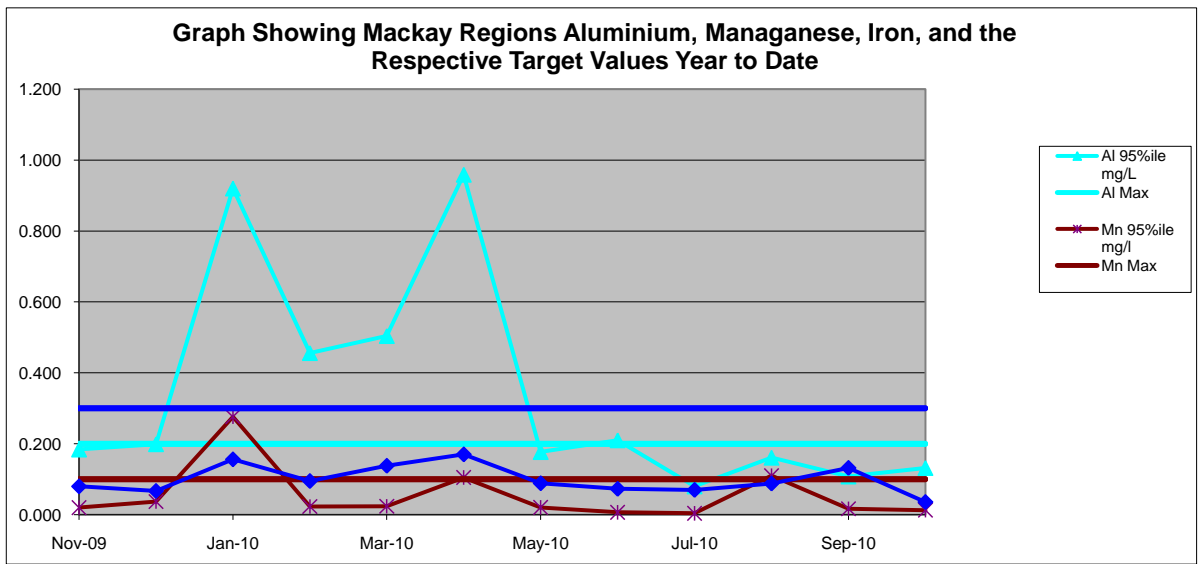
Coliform Isolation Results



Reticulation pH, Colour, Turbidity

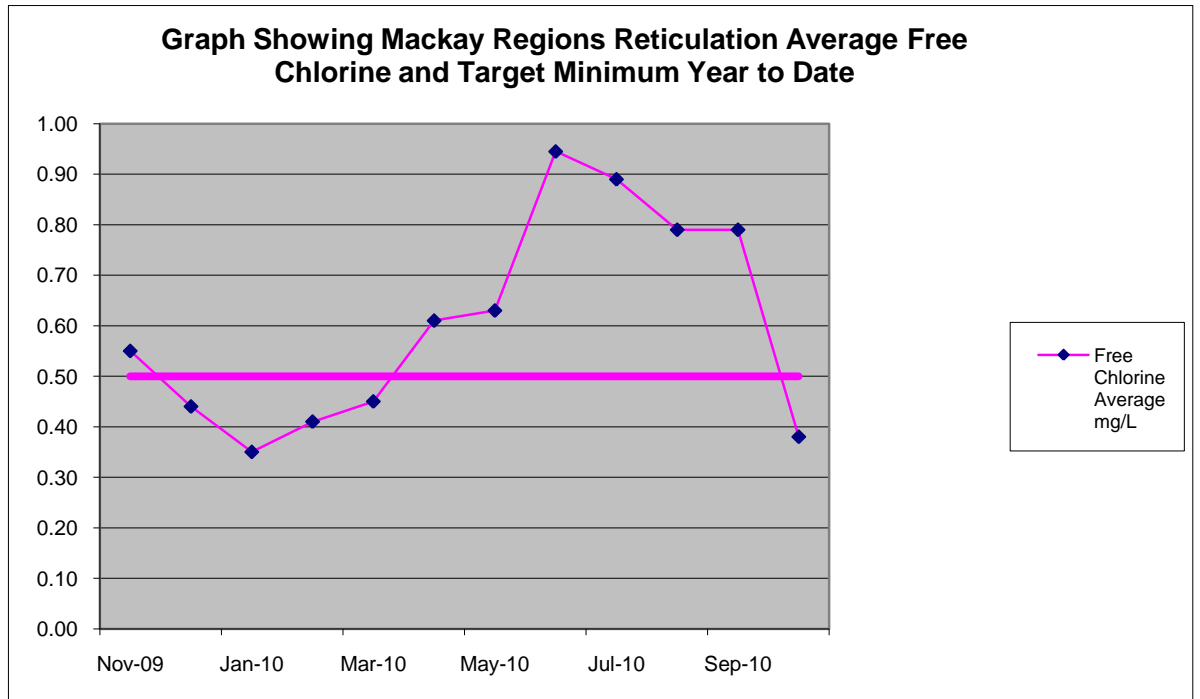


Aluminium, Manganese, Iron



Physical chemical parameters have exceeded the aesthetic guideline for Aluminium in Sarina and Manganese in Bloomsbury. A new WTP has been procured for Bloomsbury. Installation of the new plant is complete and laboratory results indicate the Manganese issues have been addressed.

Chlorine Residual Results



With an average value of 0.79mg/l the Chlorine residual is compliant with the target value of 0.5mg/l.

4.3 Wastewater Treatment System Performance

The significant events for the wastewater system are as follows:

- Repairs were carried out on the Primary Sedimentation Tank at Sarina during October. The bridge/scrapper & centre column were lifted out and a new seal was fitted at the column base, as well as a new bearing at the top of the column. New slip ring & brushes were fitted and adjustment chains put on the scrapers. Since the completion of these repairs there has been a further significant improvement in plant performance with respect to effluent quality.
- Works on the buffer tank at Mirani WWTP are complete.

Mackay North Water Recycling Facility and Catchment

In September, The plant received a total of 86.03 ML of influent this month equating to an average flow of 2.87 ML/d. The maximum flow for the month 4.33 ML. Total rainfall for the month was 171.4 mm.

MNWRF Performance Summary

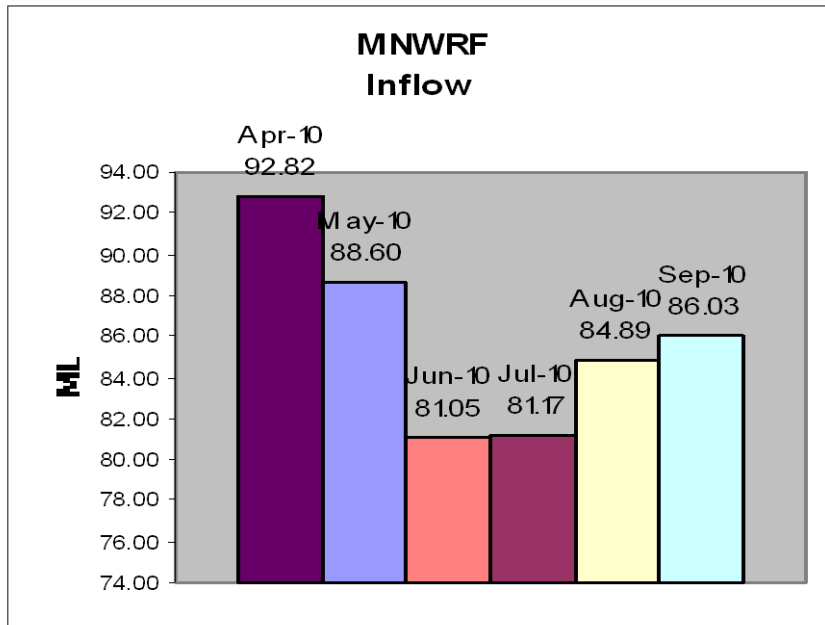
WEEKLY (8TH DAY) LAB RESULTS								
Date	Licence Effluent pH (mg/l)	Licence Effluent DO (mg/l)	Licence Effluent BOD(mg/l)	Licence Effluent COD(mg/l)	Licence Effluent Suspended Solids(mg/l)	Licence Effluent TN(mg/l)	Licence Effluent TP(mg/l)	Licence Effluent Faecal Coliforms cfu/100 ml
Limits Licence	Range 6-8.5	Min 2 mg/L	Max 20mg/L	Refer BOD	Max 30mg/L	Max 15mg/L	Max 3mg/L	50%ile 150 90%ile 1000 Max 4000
06/092010	7.2	4.8	<5	25	5	8.7	0.5	29
14/092010	7.0	4.6	<5	29	4	10.5	0.4	17
22/09/2010	6.8	5.5	<5	19	19	6.3	0.4	<1
30/09/2010	6.9	6.3	<5	30	6	5.1	0.4	<1
Limits Contract						Average < 5 mg/L	Average < 1 mg/L	
Average of all results in month						7.7	0.4	

Summary of Discharges from System

Parameter	September	August	July	YTD (10/11)
Total Wastewater Treated	86.03	84.89	81.17	252.1
Effluent Released at Outfall (ML)	98.29	91.44	94.93	284.7
Tonnes of Biosolids Removed From Site	43	86	203	332
% Biosolids Beneficially Reused	100	100	100	100

* Effluent figure higher than inflow due to monthly rainfall.

A summary of the flows over the previous six months treated by MNWRF is shown below.



Mackay South Water Recycling Facility and Catchment

In September, The plant received a total of 597.19 ML of influent this month equating to an average flow of 19.91 ML/d. The maximum flow for the month 50.1 ML. Flow to Bakers Creek 591.88ML. Total rainfall for the month was 280.8 mm.

MSWRF Performance Summary

Discharges to Storage licence compliance

WEEKLY (8 TH DAY) LAB RESULTS									
Date	Effluent Ph (mg/l)	Effluent BOD (mg/l)	Effluent COD (mg/l)	Effluent TSS (mg/l)	Effluent TN (mg/l)	Effluent TP (mg/l)	Effluent Faecal Coliforms	Turbidity	Disinfection Chlorination
Limits Licence	6.0 to 8.5	Max 20	Refer BOD	Max 30	50%ile 10 Max 30mg/L	50%ile 8 Max 15mg/L	50%ile 1000 Max 4000	Max 15mg/L	Min 1
06/09/2010	Discharge to creek								
14/09/2010									
22/09/2010									
30/09/2010									
Limits Contract	6.0 to 8.5				Average <10.0 mg/L	Average < 8.0 mg/L	50%ile <10	95 th %ile <2 NTU Max 5	> 1.0mg/L FCR
Average of all results in month	7.00				9.9	2.3	<1	0.8	2.3

MSWRF Discharges to Bakers Creek licence compliance

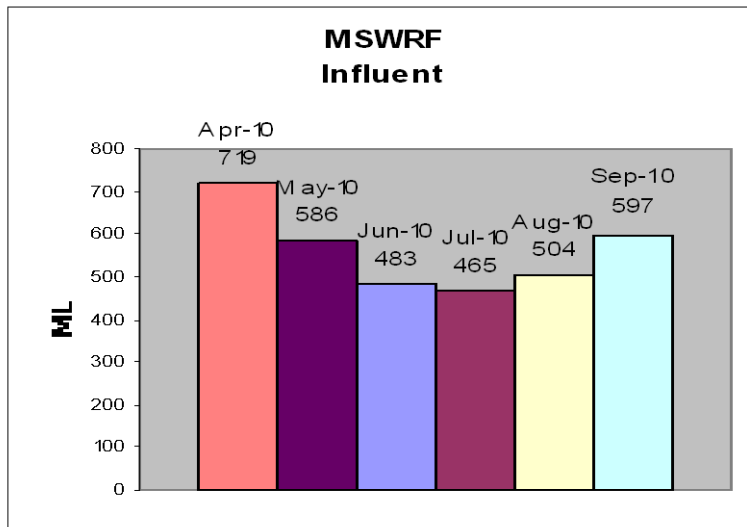
Date	Effluent pH (mg/l)	Effluent DO	Effluent BOD (mg/l)	Effluent TSS (mg/l)	Effluent TN(mg/l)	Effluent NH4	Effluent TP(mg/l)	Effluent Faecal Coliforms
Limits Licence	6.0 to 8.5	Min 2	Max 20	Max 30	Max 30mg/L	90th%ile 3 Max 6	Max 15mg/L	50th%ile 150 90th %ile 1000 Max 4000 (Up to 3 x ADWF)
06/09/2010	7.1	5.0	<5	5	9.1	1.3	3.2	12
14/09/2010	6.9	5.1	<5	3	8.9	1.4	3.3	200
22/09/2010	6.8	5.2	<5	16	4.4	0.8	0.2	500
30/09/2010	6.7	5.7	<5	30	10.3	3.3	2.6	2

Summary of Discharges from System

Parameter	September	August	July	YTD (10/11)
Total Wastewater Treated	597.19	503.65	465.12	1565.93
Effluent Released at Outfall (ML)	591.88	104.59	199.92	896.39
Effluent Reused (ML)	0	419.67	282.46	702.13
% Effluent Reused (target 88%)	0	0	42.5	N/A
Effluent Storage (% remaining RWS2)	0	0	26	N/A
Effluent Storage (% remaining RWS3)	0	0	2	N/A
Tonnes of Biosolids Removed From Site	461	552	553	1566
% Biosolids Beneficially Reused	100	100	100	100

**YTD figures are from July 2010

A summary of the flows over the previous six months treated by MSWRF is shown below.



Sarina Wastewater Treatment Plant

The plant received a total of 34.07 ML of influent this month equating to an average flow of 1.1 ML/d. The maximum flow for the month was 2.6 ML/d. Total rainfall for the month was 75 mm.

Sarina WWTP Performance Summary

MONTHLY LICENCE READINGS - SARINA					
Date	Effluent BOD(mg/l)	Effluent Suspended Solids (mg/l)	Effluent Faecal Coliforms cfu/100 ml	Effluent TN (mg/l)	Effluent TP (mg/l)
Limits	Max 30	Max 45	Max 4000	Max	Max 5mg/L
06-Oct-10	5	13	<1	18.2	6.8

Summary of Discharges from System

Parameter	October	September	August	YTD (10/11)
Total Wastewater Treated	34.07	37.0	27.29	122.31
Average Daily Flow	1.1	1.23	0.88	0.99
Effluent Released at Outfall (ML)	22.5	28.9	24.44	79.93
Effluent Reused (ML)	7.05	3.7	0	28.52
% Effluent Reused	23.9	11.4	0	23.3
Target / Licensed Effluent to be Reused (%)	N/A	N/A	N/A	N/A
Effluent in Storage (%)	100	92	100	N/A
Tonnes of Biosolids Removed From Site (m3)	20	0	0	0
% Biosolids Beneficially Reused	N/A	N/A	N/A	N/A

Mirani/Marian Wastewater Treatment Plant

The plant received a total of 19.8 ML of influent this month equating to an average flow of 0.6 ML/d. The maximum flow for the month was 0.7 ML/d. Total rainfall for the month was 51.5 mm.

Mirani WWTP Performance Summary

MONTHLY LICENCE READINGS - MIRANI								
Date	Effluent pH (mg/l)	Effluent DO (mg/l)	Effluent BOD(mg/l)	Effluent Suspended Solids (mg/l)	Effluent TN (mg/l)	Effluent TP (mg/l)	Effluent Faecal Coliforms cfu/100 ml	Ammonia
Limits to water storage	6.5-8.5	N/A	Max 20mg/L	Max 30mg/L	N/A	N/A	Max 4000	N/A
Limits to water way	6.5-8.5	Min 2 mg/L	Max 15mg/L	Max 20mg/L	Max 20mg/L	Max 5mg/L	Max 600	Max 2
6-Oct-10	7.1	7.5	<5	4	25.1	8.7	<1	6.3

Mirani discharged all effluent to the recycled water storage. The local cane farmers have not used any effluent from the reuse storage dam for irrigation in October.

The Pioneer Valley Golf Club has used 10.96 ML of effluent from the storage dam in October.

Whilst discharging to the reuse storage dam the licence limits are DO – 2.0 mg/L, BOD - 20 mg/L, Suspended Solids - 30 mg/L, and E-Coli - 4000 cfu/100ml.

Summary of Discharges from System

Parameter	October	September	August	YTD (10/11)
Total Wastewater Treated	19.8	19.8	18.1	76.22
Average Daily Flow	0.6	0.6	0.6	0.6
Effluent Released at Outfall (ML)	0	0	0	0
Effluent Reused (ML)	11	14.99	5.31	62.61
% Effluent Reused	55	78.9	29.3	82.1
Target / Licensed Effluent to be Reused (%)	100	100	100	100
Effluent in Storage (%)	102	95	88	N/A
Tonnes of Biosolids Removed From Site (m3)	0	0	0	0
% Biosolids Beneficially Reused	0	0	0	0

Effluent Recycling

Recycled Water usage in October was again negligible with only limited recycled water usage for golf clubs. With the commencement of harvesting and planting, use of RW should have increased. However, unseasonal rainfall has continued to suppressed demand for most of the MWRP area.

As suggested within previous reports, any significant rainfall events will continue to hinder RW usage. We do not expect much use of the RW in the next month with further rain forecast.

The Pump Station at RWS 3 is ready to be commissioned.

Storage levels are as follows;

RWS 2----- 100 %

RWS 3----- 100 %

Farm Balance Ponds are generally very close to full supply level.

4.4 Network Reticulation Systems

4.4.1 Civil Water Maintenance

- 5 x repairs have been undertaken on the Dumbleton raw water line after routine inspections identified the leaks.
 - The existing 100mm water main to Casey Avenue has been disconnected and the new 150mm connection to the Junior Rugby league grounds to allow for the demolition of the existing Casey Avenue Bridge which has major structure defects.
 - Repairs have been undertaken to a valve on the Marwood bore line raw water and an existing flow meter removed to allow for the installation of the fluoride dosing system onto the Marwood bores.
-
-

-
- 2 x service valves and a fire hydrant were raised in Nebo Road near the WTP after the main roads overlaid the road.
 - Flow and pressure tests were undertaken outside Mackay Golf course and the Bourke Street caravan park at Blacks Beach to allow developers to finalise their construction plans.
 - Inspections were undertaken on the Marwood bores raw water line as part of Council's planned maintenance programs.
 - Water main locations have been undertaken on the Nebo Road Peak Down's Highway intersection in an effort to resolve asset conflict on the Main Roads project being undertaken by BMD.
 - A 6m easement which is required on the Dumbleton raw water main through the Botanical Gardens has been negotiated with the botanic gardens curator supervisor. The easement is required to ensure the safe operation the Dumbleton Raw water line.
 - 2 x 200mm cut-ins has been undertaken for BDCG Contracting to allow subdivision to be connected to the water network.
 - Slow release chlorine has been installed in the Farleigh Reservoir, Leap Reservoir, Seaforth Reservoir and Holiday Bay Reservoir to maintain water quality during periods of slow use.
 - Extensive flushing has been undertaken in Seaforth to ensure water quality levels are maintained as non-seasonal rain has affected water usage.
 - Fire hydrant heads have been replaced in Creek Street, Walkerston after flow tests conducted for a local school indicated damage to the heads.
 - Both Dumbleton inlet lines were isolated and drained to allow for major components to be installed at the Nebo Road upgrade. All systems were bled after completion and the plant was returned to service.
 - Service valves were located on the South Mackay trunk line as part of Council's planned maintenance program.
 - A team was assigned to assist the Work's Department to undertake major repair works in Wood Street after they found they could not source outside expertise.
 - Water mains in Ibis Street, Slade Point were flushed after reports of discolored water were received.
 - Quotes have been obtained to install safety rails on the Kelsey Creek balance tank to enhance safety for our work force.
 - Surveys were undertaken of the Alexandria bore lines and the raw water line 2 into the treatment plant to allow for future planning progression.
 - A 150mm service valve has been relocated on Boundary Road to allow for alterations for sewer rising main alterations to be undertaken for the Boundary Road redevelopment.
-
- Installation of larger water services and firelines/metchecks were installed at:
 - 100mm Metcheck 11-13 Iridium Drive Paget to allow a developer to continue his development
-

- Other work

- 8 services were under bored in Rae Street, Crispin Drive and Colby Court as part of Councils planned maintenance works
- 2 Fire hydrants were repaired Keller Street and Pinder Street after planned inspections revealed faults
- Service valve repaired in Coles Road
- Hydrants were cleaned, raised and marked in Bucasia, Blacks Beach , Eimeo and North Mackay as part of Councils planned maintenance

4.4.2 Civil Sewer Maintenance – Recoverable Works

- 4 new HCPs were connected in Alfred Street, Kensington Court and Ware Avenue as part of small sub divisions
- 5 manhole connections were undertaken in Royal Sands Blvd, Kenny's Road Marian, Milne Lane and Boundary road allowing new subdivisions to be connected onto the network.
- 4 new man holes were constructed in Shakespeare Street and 40 metres of Sewer main rehashed to allow the redevelopment of the Baptist Church
- 50 metres of sewer main rehashed in Boundary Road to allow developer to construct a large shed

4.4.3 Standard Maintenance

- 16 HCP blockages were cleared in October, Cutfield Street, Cinnamon Drive, Information centre, Eimeo toilets, Donaldson Street, Nelson Street, The Crescent, Gemini Drive toilets, Tass Street, Slater Ave, Downey Ave, City Library toilets, Shoal Point toilets, Iluka Park toilets, Coyne Street and Holiday Bay toilets.
- 3 HCP repairs at Denton Street, Ivy Drive and Slater Ave
- 3 Main blockages at Bridge Road, Shakespeare Street and Crichtons Road
- 12 Manhole repairs at Wallace Street, Royal Sands , Tass Street, Eimeo Road, Bridge Road, Gannets Street, Harbour Road, Phillip Street, Nicklin Drive, Cavanagh Drive, Pollorus Crt and Amstead St
- 20m main repair at Gannet Street – 150 PVC extension.
- Overflow clean ups at Downey Ave, Mackenzie Street, Slater Ave and Cooks Lane.

4.4.4 Mechanical/ Electrical

Entry of maintenance data into Hansen was conducted during July as a trial of the system and an electronically generated report was developed.

Due to resourcing issues no data has been entered into Hansen during October.

The implementation of a schedule & dispatch team is in progress, this will provide the mechanism to capture data and provide electronically generated reports.

4.4.5 CCTV Investigations

- New developments:

Beaconsfield Sewer Pump Station	14m
Gordon Street Pump Station	37m
Evolution Industrial Estate	96m
Nabilla Meadows Estate	472m
- General Mains Investigations:

Bridge Road West existing sewer	372m
Bridge Road replaced sewer	3m
165 Archibald Street South	19m
9 Melaleuca Street	77m
99 Wheeler Drive	210m

4.4.6 I/I Investigations

- Manhole investigations were undertaken in the following areas in preparation for the next smoke testing program. Wentford street, Ivens Street, Gorman Street, Dewards Street, Pattisons Road, Contor Drive, Simpson Road, Bakers Creek Road, Tass Street, Jorgensen Road and Metsen Street.

4.5 Trade Waste

4.5.1 Main focus

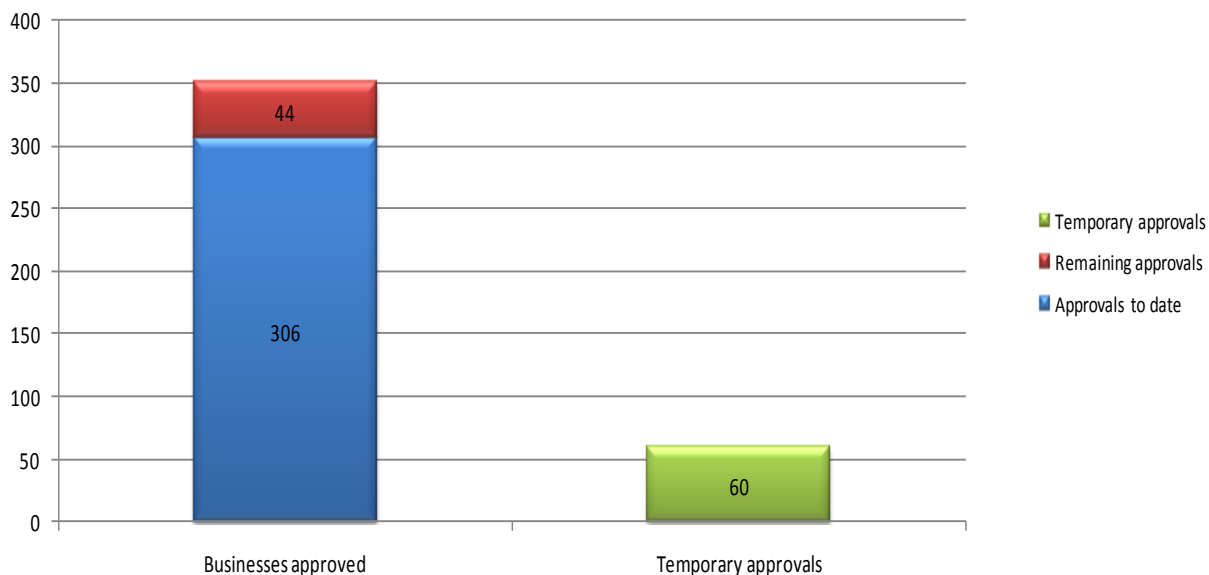
October was another busy month for the Trade Waste Department. Trade waste implementation in the Mackay CBD continued with the team well on track to meet current KPI targets.

The Mackay City Focus Forum was attended by a member of the Trade Waste team who manned an information stall and also acted as a facilitator in the forum process.

The Mackay branch of the Australian Dental Association invited the Trade Waste Department to address their monthly meeting. Our attendance was well received and dispelled the concerns of the local dental industry members and helped inform them of their trade waste obligations.

Interviews were held for the new Trade Waste Inspectors Assistant position, with the successful applicant due to start in November. Applications for the vacant Trade Waste Inspector position have been called for.

Approvals to be issued by July 2011



4.5.2 Trade waste statistics

October 2010	Bakers Creek WWTP	Bucasia WWTP	Sarina WWTP	Mirani WWTP
Total approvals issued @ 31 October 2010	338	35	3	1
Businesses approved @ 31 October 2010	277	25	3	1
• Category 1	69	7	1	0
• Category 2	67	5	1	0
• Category 3	141	13	1	1
Applications under assessment @ 31 October 2010	14	0	0	0
Temporary approvals				
Temporary approvals issued for October 2010	8	0	0	0
Temporary approvals awaiting formal approval @ 31 October 2010	60	0	0	0
Total non-generator assessments				
	293	0	0	2
Non-generator assessment for October 2010	0	0	0	0
Total approvals issued				
Approvals issued for October 2010	12	0	0	0
• Category 1	0	0	0	0
• Category 2	3	0	0	0
• Category 3	9	0	0	0
Compliance tests performed				
	59	9	1	1
• Within set limits	24	0	0	0
• Exceeding set limits	13	0	0	0
Outstanding test results @ 31 October 2010	22	9	1	1

4.6 Plumbing

4.6.1 Main focus

The vacant Senior Plumbing Inspector position has been filled with the recent appointment of Dean Eiser. Dean brings with him to this role 15 years experience as a Plumbing Inspector and more than 25 years with Mackay Regional Council. As a result of Dean's appointment as Senior Plumbing Inspector, Dean's previous position as a Plumbing Inspector, together with the already vacant Plumbing Inspector position, now need to be filled.

Offers have been made to two applicants for the vacant plumbing inspector positions; however, both applicants have declined the offers. Further interviews will be conducted this month in an effort to fill both positions. This is the second time the Plumber inspector positions have been advertised without success.

The Inspection Coordinator and Senior Plumbing Inspector recently attended a plumbing conference at the Sunshine Coast. The conference was opened by the Hon. Stirling Hinchcliffe, MP, Minister for Infrastructure and Planning and had no less than 11 speakers on topics ranging from water reform to the affects of reactive site soils on drainage installations.

Further review of the checklist process implemented as part of the communiqué circulated to stakeholders in August has revealed that certain information is consistently not being supplied with applications, allowing the opportunity to further educate applicants at the time of lodgement as to mandatory information required for all applications. Overall, the checklist process appears to have been well received and has proved successful in improving the quality of plumbing applications received.

4.6.2 Plumbing Inspections

Inspection type	Oct 2010
Booked inspections	401
Additional inspections	5
Urgent inspections (Form 3)	8
Total	414

There is an increase in the number of Form-3 inspections listed than previous months which is due to the two plumbing inspector vacancies.

4.6.3 Plumbing Applications

Location	October 2010 Received	October 2010 Decided	Information requests issued	Average days to decide	October 2009 Received
Central	69	58	10	6	80
West	21	20	1	3	37
South	10	8	2	3	13
Total	100	86	13	4	130

The total number of plumbing applications received for October 2010 was 100, compared to 130 for October 2009. The total number of plumbing applications decided during October 2010 was 86. The total number of information requests issued during October 2010 was 13.

5 WASTE SERVICES

5.2 Management

- The Waste Services Coordinator attended the LAWMAC meeting held on 1st October 2010. This meeting was held to review the National Waste Strategy Policy.
- Work continues on the evaluation of the Resource Recovery Operations and the Landfill Gas Management & Energy Utilisation Services tenders.
- Design work for the capital program continues for the closure/remediation works of Bayersville, Hay Point, Otterburn and Sarina landfills; the future transfer stations for Hay Point, Otterburn and Sarina; the closure plan for cell 1 of Hogan's Pocket and cell design for cell 2 at Hogan's Pocket.

Active Waste Disposal Sites

	OCT-10			SEP-10		
	Inspections	Actions		Inspections	Actions	
		required	completed		required	completed
Hogan's Pocket L/F	4	1	1	13	4	4
Paget T/S	6	2	1	18	0	0
Bloomsbury T/S	1	2	2	2	0	0
Kolijo T/S	0	0	0	3	0	0
Kuttabal I/B	3	0	0	2	0	0
Seaforth T/S	0	0	0	3	0	0
Sarina L/F	17	2	2	14	3	3
Hay Point L/F	11	0	0	10	2	2
Koumala T/S	3	0	0	2	0	0
Colston I/B	6	2	2	6	0	0
Otterburn L/F	6	0	0	11	2	2
Gargett L/F	11	3	3	13	0	0
Finch Hatton T/S	5	0	0	7	0	0
Eungella T/S	0	0	0	3	1	1

Greenwaste Sites

	OCT-10			SEP-10		
	Inspections	Actions		Inspections	Actions	
		required	completed		required	completed
Bayersville	0	0	0	0	0	0
Walkerston	1	0	0	0	0	0
Bucasia	1	0	0	4	2	1

Closed Waste Sites

	OCT-10			SEP-10		
	Inspections	Actions		Inspections	Actions	
		required	complete		required	complete
Illawong (Far Beach)	0	0	0	0	0	0
Bakers Creek	1	0	0	3	1	1
Eton	0	0	0	0	0	0
Habana	0	0	0	0	0	0
St Helens	0	0	0	0	0	0
Midge Point	0	0	0	0	0	0
Rural Bin Sites	0	0	0	2	1	1
Seaforth L/F	0	0	0	0	0	0
Koumala	0	0	0	2	2	0

Waste Site Transactions (Receipts Issued)

	2010/11				2009/10								
	Oct	Sep	Aug	Jul	Jun	May	Apr	Mar	Feb	Jan	Dec	Nov	Oct
Hogan's Pocket L/F	51	43	64	9	3	19	19	44	27	32	31	18	17
Paget T/S	9,989	8,365	18,802	8,635	8,468	9,259	7,832	14,508	8,871	10,740	10,355	8160	9724
Bloomsbury T/S	135	112	251	117	97	124	151	370	99	179	157	202	146
Kolijo T/S	149	135	286	118	127	180	109	151	138	157	169	244	155
Kuttabul I/B	119	123	266	128	153	185	194	182	132	175	166	126	180
Seaforth T/S	264	229	520	239	211	278	238	965	232	415	313	501	292
Sarina L/F	910	740	1,679	462	362	501	466	1455	431	707	707	389	646
Hay Point L/F	298	222	542	283	238	255	223	717	196	383	302	460	633
Koumala T/S	19	36	43	18	22	29	23	47	17	34	45	42	58
Otterburn L/F	499	366	874	350	338	411	444	1478	369	367	486	347	495
Gargett L/F	103	97	205	88	92	124	121	273	95	136	160	79	119
Finch Hatton T/S	84	67	128	68	52	57	53	203	61	94	80	54	91
Eungella T/S	46	34	88	56	36	66	15	76	55	78	71	54	58
Bayersville Greenwaste Facility	1,032	559	1,572	595	549	819	2,681	5412	864	1139	671	847	970

Walkerston Greenwaste Facility	254	124	377	151	126	175	997	1899	203	216	137	158	184
Bucasia Greenwaste Facility	775	413	1,165	501	398	594	3,074	6273	517	615	490	594	657

Collection Services

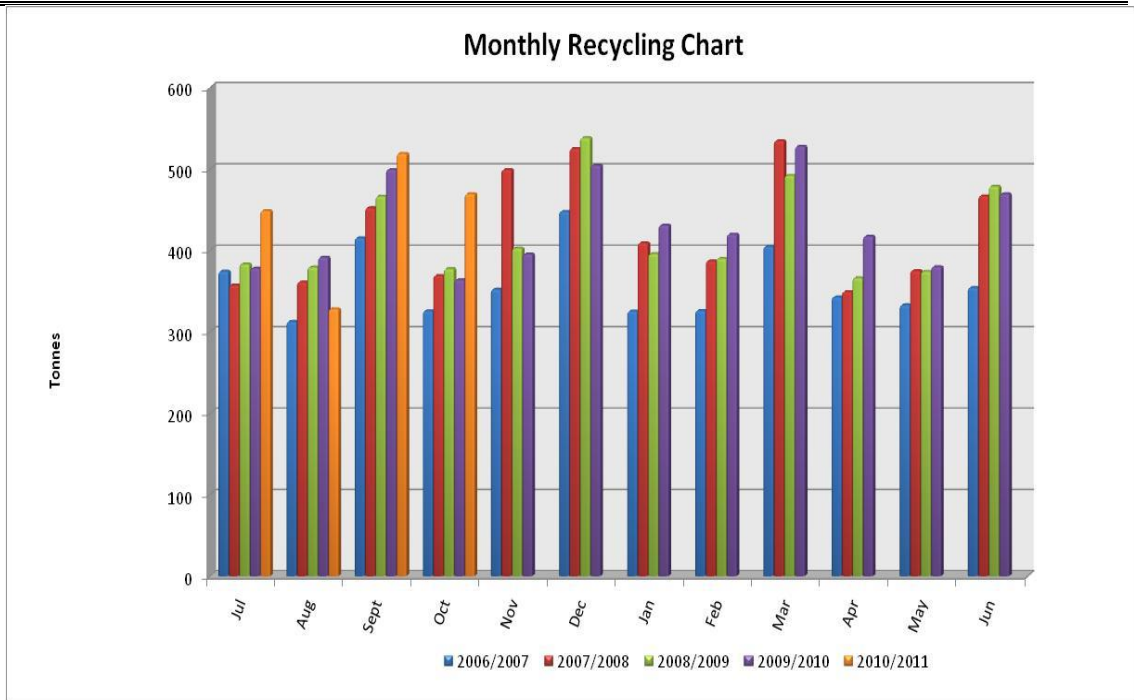
- Collection services provided by Council's contractors have been performed satisfactory

	Oct-10	Sep-10
No of new waste bin services provided	93	112
No of waste bin replacements - damaged	81	75
No of waste bin replacements - stolen	35	36
No of waste bin repairs	72	66
No of New recycling bins services	80	111
No of recycling - replacements - damaged	4	5
No of recycling - replacements - stolen	15	4
No of recycling bins - repairs	6	9
Waste collection complaints	3	0
Waste collection enquiries	16	15
Waste collection inspections	10	3
Waste Bin inspections	8	0
Recycling contamination complaints	0	0

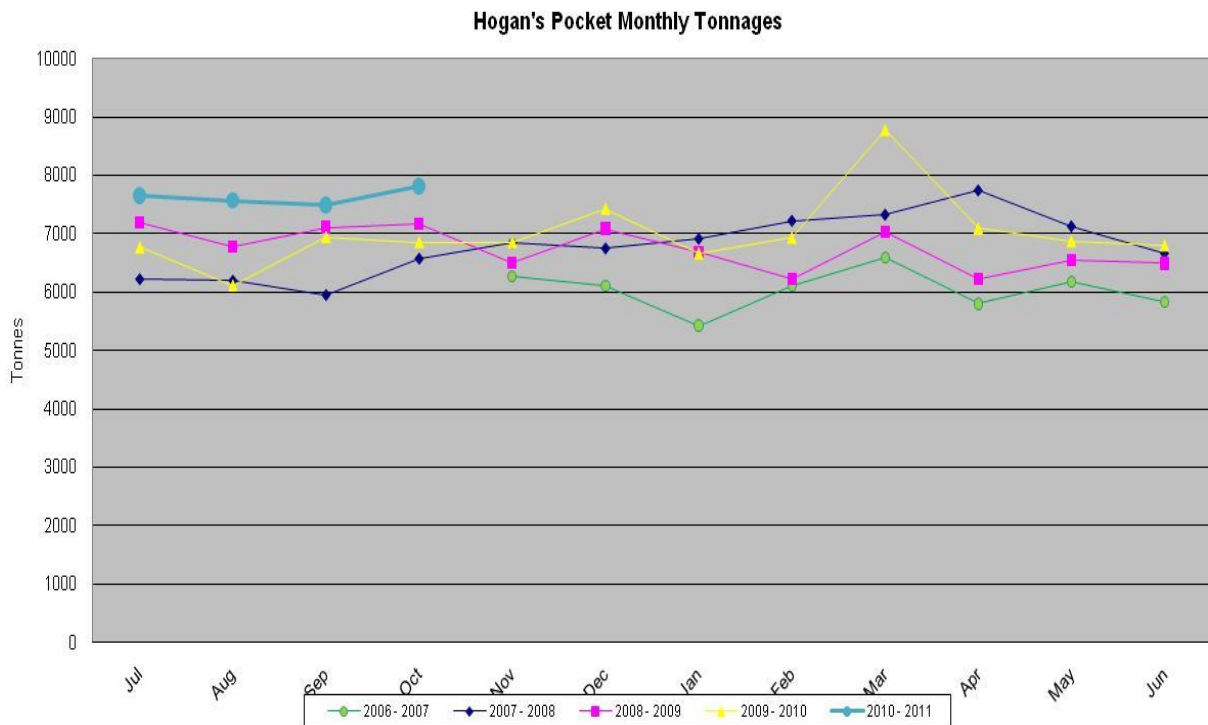
Bin Auditing Program

	Oct-10	Sep-10
Number of audits	161	0
Number of letters issued	16	0
Number of new services ordered	0	0
Number of bins surrendered	2	0

Recycling Collection



Waste Disposal Monthly



Main focus of work activities:**Environmental Education duties:****Education visits to the Materials Recovery Facility:**

Co-coordinated and performed the following school and community visits at the Materials Recovery Facility:

- St Patrick's Catholic School- 2 Students & 1Adult
- Walkerston State School (Joint Waste & Water session)- 48 Students & 6 Adults
- Mercy College- 1Student and 1 Adult
- Mackay Regional Council- 7 Adults
- Holy Spirit Catholic School-179 students & 8 Adults

School / Community Education Visits

- Two recycling education sessions given at Sarina State School. Total in 145 students and 6 teachers.

School Recycling Program-DERM

- Collated and fielded enquiries for Marian State School "Do the right thing, use the right bin" school recycling project application. Forwarded the application onto Department of Environment and Resource Management (DERM) for processing. Liaised with DERM and the school to assist with processing the application.

National Recycling Week- (8-14 November 2010)

- Prepared for the National Recycling Week advertising campaign - with the assistance of Corporate Communications.
- Assisted with the shoot of the recycling TV commercial for National Recycling Week.

Clean Up Australia Day – (6 March 2011)

- Lodged an expression of interest with Clean Up Australia Day (CUAD) for the Mackay Regional Council to participate in 2011.

Training:

- Attended 'Negotiating the Gender Divide'- 28 &29 October 2010

Conference / meetings:

- Attended a meeting with Corporate Communications on October 12 &13 to discuss the advertising campaign for National Recycling Week.
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